TREES

PALESTINE

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FLOWERS AND TREES OF PALESTINE

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CYPERUS PAPYRUS: PAPER REED.

Frontispiece.

FLOWERS AND TREES OF PALESTINE

BY

AUGUSTA A. TEMPLE

WITH FORTY ILLUSTRATIONS FROM PHOTOGRAPHS TAKEN BY THE AUTHOR

'My journeyings were brought to Jericho.
BROWNING

LONDON
ELLIOT STOCK, 62, PATERNOSTER ROW, E.C.
1907

974

PA Dept of Conservation and Natural Resources

1936

CHAMISHO OSOR BISHVAT

Bureau of Jewish Education
Buffalo, N. Y.

CHAMISHO OSOR BISHVAT

Springtime in Palestine

At the time when we, in America, are still shivering from cold, and are at the very height of the winter season, Palestine, the Land of Israel, is about to enjoy the first breath of spring. Gone is the winter season, which is marked there by rains; the month of Shvat has arrived, amidst lightning and thunders and unusually heavy rains. Torrents of swift waters flow down the hillsides. But they won't last much longer, for spring is not far behind.

The children of Palestine look longingly at the almond tree; for it is this tree that is the messenger of spring. It is the first tree to show signs of life. And lo, and behold. The leafless almond tree has burst forth with white and pink blossoms, giving forth its sweet and gentle smell. How lovely is the almond tree in its festive dress, standing alone with its rose-white buds amidst the other bare fruit-trees. Springtime has come to Palestine, and with it the warm sunshine, cheering the land, and warming it with new life, new hope, and new activities. Here in America, it is the end of January or early February, but there in Palestine, it is the month of Shvat, and gleefully, it ushers in the spring.

The New Year of the Trees

And other trees follow the almond tree. One by one they blossom forth, putting on a green garb of leaves and buds. The trees are proud of their new spring dress. For their time has come. On this month of Shvat, they observe a holiday, all of their own. Soon comes the Chamisho Osor Bishvat, the 15th day of the month of Shvat, and this day is their day. It is Rosh Hashonah La'Ilanoth, the New Year of the Trees.

Our forefathers, back in the days of old, when Israel lived in the Land of Israel, set aside this day as an important day. It was on this day that farmers would bring fruit gifts from the fruit of the trees to the Temple in Jerusalem, in accordance with a commandment in the Bible. This was the New Year of the Trees, and from the fresh crop, samples were sent to the Temple. This is how our people observed the day.

A beautiful legend is told about this day. On this day the fate of the trees is in balance. It is to be decided which tree is to wither, which is to flourish; which will bear fruit, and which will remain barren. Truly, a New Year, a Rosh Hashonah of the Trees.

Our Forefathers Planted Trees

We already know that Chamisho Osor Bishvat (15th of Shvat) was observed in Palestine long ago. We even know why and how it was observed by our forefathers. They realized that in a warm land such as Palestine is, trees were important. And so they were thankful for them and their crops. To encourage the planting of trees, they had a very beautiful custom. Whenever a boy was born, a cedar tree was planted; if a girl was born, a cypress tree was planted. And as the children grew so the shoots were tended; when the children grew up, and were given in marriage, the branches of the trees furnished the poles for the wedding canopy, the "chuppah." In this manner the land was plentiful with trees, and was famous for its beautiful orchards and fine forests.

What Happened to the Trees of Palestine

All this has changed during the many years that passed since the Jews were driven out of Palestine. Palestine rapidly became a land of barren hills, and marshy valleys, full of dreadful and poisonous swamps and diseased lands. Where once stood forests and orchards, now the land lay bare and waste. The fertile soil has also turned barren, and was rapidly washed away by streams and water currents.

This change was due, for one thing, to the many wars which were waged in Palestine. Also, the people who lived in Palestine since, gave no thought at all to helping the trees remain in the country. Thus the Turkish government, which for years ruled Palestine, taxed trees. This did not encourage the planting and tending of trees. Then again, the Arabs, our neighbors in Palestine, cut down the trees before they were big enough.

With trees gone, the soil of Palestine changed. Later we will learn what trees can do to make the soil fertile.

What the Jewish Pioneers Did About It

When modern pioneers began to return to Palestine to rebuild it as a Jewish Homeland, about 40 years ago, they found that Palestine was almost a desert. Wasteland and malaria swamps stretched as far as the eye could see. They at once decided that if Palestine was to be rebuilt, it must again become the land of trees. They must dry up the swamps which gave malaria and other dreadful diseases to the newcomers. And so they began planting trees. And the first trees they planted was one kind which they imported from Australia, known as Eu-ca-lip-tus tree.

This Eu-ca-lip-tus tree, while it bears no fruit, did its share in upbuilding the soil of Palestine. This tree takes in a lot of moisture from the ground, and wherever a few of them were planted, they dried up marshes and swamps. Thus many Jewish colonies were saved because of these trees, which dried up the poisonous marshes, and cleaned the climate, and made it healthy. It is interesting to know that the Arabs call this tree the "Jew-Tree" because the Jews brought it into Palestine. Today, every Jewish village boasts of these tall trees, that saved many lives.

Since that time, tree planting became a very important duty. The Jewish National Fund, which buys land in Palestine for the Jewish people, set aside a large sum of money to be used in planting trees. Today over a million and a half trees of all kinds and varieties have been planted all

over Palestine. Complete forests named after important people dot the map of Palestine today. The best known of these are the Herzl Forest, the Balfour Forest, and more recently, the Washington Forest, named after the first President of America.

Why Are Trees So Important?

Our nation thought of trees first, because they saw that trees were extremely important in the upbuilding of the land. With forests planted on the hillsides, rains would no longer wash away the fertile soil. The trees help to keep the water in the ground around their roots, and so protect the soil, and keep it from sliding down. Without trees, the soil of Palestine would again become dried up and spoiled. The soil is made fertile because of the water in it. And trees keep that water in the soil.

So we can see that trees are important to keep the soil in good shape. But of course, we can think of many other uses that make them important. Trees became a source of income to the settlers. Hundreds of orange groves bear the oranges, which are so famous that they sell the world over; olive, date, fig, and other fruit trees also bear fruit, which the grower sells. Large sums of money are raised in this manner, and this helps the country to become prosperous.

Then again, Palestine is a country which is being built up. Trees are important for building purposes, and also for furniture. Then too, we all want Palestine to be a beautiful country. Trees make a country beautiful; their shade is a comfort and joy to the population of a hot country.

Now we can see clearly that there were very good reasons why the Jewish National Fund has taken it upon itself to plant trees, in addition to other important tasks.

HOW PALESTINE CELEBRATES THE HOLIDAY TODAY

Is there any wonder, then, that Chamisho Osor Bishvat has become a very important day in the life of modern Palestine? You must remem-

ber, that while we, away from Palestine, also hold this day dear, it is Palestine where the day becomes a most important event in the life of the nation, and the scene of the greatest celebrations.

Both young and old take part in observing Chamisho Osor Bishvat. The older folks assemble in synagogue to sing songs, and praise the fruits of the land. Special lessons and portions are read from Scriptures and other holy books, dealing with grain and fruits; and all the while they partake of the luscious Palestine fruits, with which the tables are well stocked.

But it is the children of Palestine who feel that the New Year of the Trees is also their holiday. This day to them is the Jewish Arbor Day, and on it trees are planted throughout the length and breadth of Palestine, with the children as guests of honor, to do the planting.

No sessions are held in the schools on that day. Each school gathers its pupils, and in a holiday spirit, with songs and banners afloat, and in an orderly procession, thousands of children pass through the streets of cities and villages to a chosen spot, where the planting takes place. Having planted the trees, they are given fruit, sweets, and goodies, and return home amid great rejoicing. The day is concluded with hikes, picnics, and athletic events. Old and young join the out-of-door celebrations.

This is quite the big event of the year. Here is a description of the big day as given by a Palestine school boy:

"The school yard hums with the noise of the children. Theeir faces are lit up, wreaths of beautiful flowers of spring adorn their heads. The banners move in the breeze, each school with its own flag. A whistle is blown. The murmur ceases and all eyes are turned to the teacher who addresses the upturned faces. Another half-hour and the whole camp moves forward slowly, step by step, heel and toe, between walls of spectators on either side.

"At the head of the procession is the band, but we at the end can only catch the sound of the drum. The houses are decorated with branches and foliage. Everything is green. This is a festival of nature. The trees nod as though to say: 'Shalom, children, peace to you. Go forth and plant many trees, for the salvation of the land lies in its trees and forests.'

"Finally, we leave the dusty town and reach the hills, where a friendly wind meets us. A mighty song bursts forth from the mouths of thousands of children, startling the air. The procession is long, and winds like a snake along the highway. We reach the new quarter. As though from among the boulders it bursts forth with its gardens and red flowers. An arch of honor stands before us, also clothed in branches. We reach the spot at which we are to plant our trees, and those chosen for the honor leave the ranks of their fellows.

"And as the trembling hands place the seedlings in the soil, the young planters pray for the success of their trees. The trees nearby sway to and fro, gently, as if also praying for the success and long life of their fellow trees."

As we read this description we wonder no longer why and how the children of Palestine grow up with love for Palestine, for the soil of Palestine and the land of their forefathers. For planting the trees, they are also planting their own futures in the Land of Israel.

How Chamisho Osor Bishvat is Celebrated Outside of Palestine

It must give you a thrill to remember that while Jews were away from Palestine, for two thousand years, they never stopped observing this day. They carried with them the memories of their former life there, and these memories were handed down from generation to generation, unto this day. And so it was, that year in and year out, on the 15th day of Shvat, they observed the New Year of the Palestine Trees, and remembered the days when their forefathers brought on this day the new fruit crop to the Temple, and planted trees.

On this day children in lands outside of Palestine are treated to fruit parties. Palestine fruits, such as dates, almonds, figs, carob, pomegranates, are distributed among them. Jewish schools and centers hold special assemblies and entertainments. Palestine festivals are held on this day.

We also help Palestine in some practical ways. By eating the frui we help the fruit growers to sell these products abroad. Funds are rais on this day, with which to plant more trees in Palestine. Since it cos only $1.50 to plant a tree, many schools, societies, and individuals rais money to plant a tree or two. Usually the tree is planted in honor o some one, or to celebrate some event.

Would it not be a splendid thing if your class or school could rais enough money to plant a tree for this occasion?

So you see, that through the holiday we are brought nearer t Palestine; we tie ourselves stronger to her soil, and we grow to love mor and more this wonderland, where a new life is dawning for the Jew.

TO

THE 'HONESTEST ROOT-GATHERER'

PREFACE

THE idea of this little book grew out of a tour in Palestine made in the spring of 1904.

A study of lists of desirable books to be carried on such a journey, where accommodation is necessarily limited, revealed the fact that no portable handbook containing a general list of Palestine flowers and trees existed.

Bible flowers have been described by several writers, but the number of these is comparatively small.

It seemed to me, therefore, that a short account of the trees and flowers, with special reference to those mentioned in the Bible, might be of use to future travellers in the Holy Land—where the wild-flowers are a daily and hourly joy and

> 'Wonder at the bounteous hours,
> The slow result of winter showers:
> You scarce can see the grass for flowers'—

and that such a little book might also be of interest to students of the Bible.

I have gleaned information from many of the well-known authorities, and owe a special obligation to Canon Tristram's works, to the authors of the 'Treasury of Botany,' and to Dr. Post's 'Flora of Syria, Palestine, and Sinai.'

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CHAPTER I

CHARACTERISTIC FLOWERS OF PALESTINE

'There sprang the violet al newe,
And fresh pervincke riche of hewe,
And flouris yelowe, white, and rede;
Such plente grew then in the mede.'

CHAUCER.

PALESTINE is essentially the land of wild-flowers; the brilliant hues of many contrasting kinds form one of the most interesting features of the landscape, and for a brief spell alter the face of Nature.

Here in England we have fine effects of colour in the spring—the lilacs and laburnums of the villages, the hawthorn and apple-blossom of the fields and hedgerows, the broom and gorse of the commons. But here we have no gay crowd of scarlet tulips as in Galilee, no purple gladiolus overtopping the corn in which it grows, no iris of the blue of the summer skies, no army of lupines standing erect on the plains, no Judas-trees flinging showers of deep pink blossoms over

friend and foe alike from their vantage-ground on the hills round Jerusalem—to say nothing of the tropical flowers near the Dead Sea, isolated for countless centuries from their African compatriots, and clothing the valleys with their delicate beauty.

The flower that first strikes the eye in travelling through Palestine is the *Anemone coronaria* (see Illustration I.). It grows by the wayside, on the hills, and in every part of the country in bright profusion. In the plain of Gennesaret the anemone covers great stretches of land with its beautiful scarlet and white blossoms, and these are now generally identified with the 'lilies of the field' (Matt. vi. 28). Red is the prevailing colour, but white, blue, and purple are also abundant.*

The Arabs use the word *susan* (Hebrew *shûsan,* translated 'lily' in the Bible) as a general term for flowers of the lily kind, such as tulip, iris, anemone, ranunculus, etc., and hence the references in the Old Testament—as, for instance, the 'flowers of lilies' used in the decoration of the temple built by Solomon (1 Kings vii. 26), the 'lily of the valleys' of the Song of Solomon, the 'lily' of Hos. xiv. 5 ('He shall grow as the lily,

* Dr. Post considers that if by 'lilies of the field' we understand simply wild lilies, the numerous plants comprehended under the name 'lily' would be included; if we take one flower only, he inclines to the gladiolus. Canon Tristram, however, gives his authority for the anemone.

I.—ANEMONE CORONARIA: 'LILIES OF THE FIELD.'

II.—LILIUM CHALCEDONICUM: SCARLET MARTAGON LILY.

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and cast forth his roots as Lebanon'), etc.—probably signified any or all of these. To these may, perhaps, be added *Lilium chalcedonicum*, or Martagon lily (see Illustration II.), which is red, as some of the texts would seem to suggest; of rapid growth, and with a succulent stem.

The rich scarlet of the *Adonis Palæstina* (see Illustration III.), another claimant among the 'lilies,' asserts itself everywhere; the 'pheasant's-eye,' *A. æstivalis* (see Illustration IV.), is common on the plains; *A. autumnalis*, with red or yellow flowers, under Lebanon. These plants are easily distinguished by their light-green, fennel-like foliage.

There are a good many varieties of poppies, including several English species—field-poppy, rough-poppy, etc. Also several handsome glauciums (see Illustration V.) and hypecoums, belonging to the same family. The tiny *Hypecoum procumbens* has irregular-shaped orange-coloured petals, and is of creeping habit, as its name implies. The white opium-poppy is cultivated, and a Jewish authority says that the plant and its stupefying product were so well known two thousand years ago among the Hebrews that the older of the two Talmudim, the Jerushalmi, warns people against the dangerous consequences of opium-eating.*

Between Jezreel and Tiberias an effect of gradations of yellow is given by tufts of wild

* 'Bible Flowers.'

charlock, *Sinapis arvensis*, and the deeper tones of the prickly broom, *Calycotome spinosa*, also the beautiful Spanish variety, *Spartium junceum*. Of the white broom, *Retama rætam* ('juniper' in 1 Kings xix.), Canon Tristram says: 'This is one of the exquisitely beautiful plants of the country. The gauzy delicate pink and white hues of a whole hillside covered with shrub in blossom, as I have seen it in Gilead, is unsurpassed even by the apple-blossom of an English orchard.'

The dainty rose-pink flowers of a small flax-plant, *Linum pubescens*, haunt the limestone hills of Galilee. Like the other members of this family, it is of fragile appearance, with fugitive blossoms and slender stems—

'When through its half transparent stalk at eve
The level sunshine glimmers with green light.'

L. sativum is the 'flax' of Exod. ix. 31 ('and the flax and the barley were smitten'), and was cultivated in Canaan before the Israelite settlement (Josh. ii. 6): 'But she had brought them up to the roof of the house, and hid them with the stalks of flax.'

In close proximity with the pink flax are the red and blue varieties of pimpernel,* *Anagallis*

* 'Fire-hearted pimpernel
Communing with some hidden well,
And secrets with the sun-god holding,
At fixed hour folding and unfolding.'

III.—ADONIS PALÆSTINA.

IV.—ADONIS ÆSTIVALIS: PHEASANT'S-EYE.

To face page 4.

Phœnicia and *cærulea*, and a small pink cyclamen, *C. hederæfolium*. Another common cyclamen is *C. Persicum* (see Illustration VI.). The dark blue and white lupine, *Lupinus pilosus*, is found in the same locality and in the Jordan Valley, and in masses in the Valley of Nablous. Several varieties of asphodel are common on the plains and hills—the graceful *Asphodelus ramosus* (see Illustration VII.), which has a pink tint in Palestine, but is nearly white in cultivation in England; *Asphodeline lutea* (see Illustration VIII.), with bright yellow spikes, and others. The closely allied *Eremurus spectabilis* (see Illustration IX.) is found on Lebanon and Anti-Lebanon.

In the Jordan Valley, on the banks of its tributaries and by the Sea of Galilee, oleanders (see Illustration X.) with dark green leaves and bright pink blossoms stand in fragrant beauty—

> 'Like hermits watching still
> Around the sacred hill
> Where erst our Saviour watched upon His knees.'

Some people suppose oleanders to have been the 'willows of the brook' of Lev. xxiii. 40, used for constructing booths for the Feast of Tabernacles. This plant has also been identified with Ecclus. xxiv. 14: 'I was exalted like a palm-tree in Engedi and as a *rose-plant* in Jericho'—the reference being to a tall flowering shrub, the locality, type, and Greek name rendering the

suggestion plausible. On the eastern side of the Jordan the oleander becomes a timber-tree 25 feet high, its branches bending under the weight of blossom.

This neighbourhood is specially favoured florally on account of its warm climate, the Lake of Gennesaret lying 655 feet below the level of the Mediterranean Sea. Hence orange-trees flourish at Tiberias, and two varieties of an arum-like plant, *Biarum pyrami* and *B. Alexandrinum*, arums,* tulips, irises, purple convolvulus, and many other inhabitants of warm climates on the shores of the lake. Canariensis and stocks also flower in the monks' garden at Tiberias by the middle of March.

At Jaffa, which is the usual landing-place for Jerusalem (a very rocky port, one may mention in passing), are large groves of orange and lemon trees, which scent the air for quite a long distance. Here also are palms of different kinds, and purple masses of bougainvillea flung over buildings and outhouses in the hotel gardens.

The genus of salvias is one of the largest in Palestine (the *Astragalus* perhaps heading the list in this respect) ; salvias deck plains, fields, and mountains in varying species and colours, the blue *S. grandiflora* from the coast to sub-alpine

* 'Thirsty forest arum ever dreaming
Of lakes in sunny wildernesses gleaming.'

VI.—CYCLAMEN PERSICUM: PINK CYCLAMEN.

V.—GLAUCIUM FULVUM: HORNED POPPY.

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Lebanon, the white *Syriaca* in vineyards and fields, the yellow *montbretia* on Mount Hermon.

Another large genus with several species peculiar to Palestine, and representatives all over the country, is ranunculus. *R. asiaticus* is universal, orange-coloured, scarlet, and white, and is the parent of the garden varieties.

The pretty yellow labiate, desert spike, *Eremostachys laciniata,* blossoms in March on the slopes of Carmel, and is common in warmer parts of the country. Later in the season the European plumbago shows its purplish-red flowers in waste places, with crimson and white everlastings. The deep-blue Syrian speedwell, *Veronica Syriaca,* is not unlike our English germander speedwell; it is general on the plains, and the large blue periwinkle, *Vinca herbacea,* on Esdraelon and Sharon.

The rose (Isa. xxxv. 1: 'The desert shall rejoice and blossom as the rose,' and, Song of Sol. ii. 1: 'I am the rose of Sharon') is now generally identified with a yellow and white narcissus, *N. tazetta* (see Illustration XI.), which grows abundantly in the plain of Sharon. It is strongly scented, and the natives of Palestine still delight in its 'arrowy fragrance,' and carry its blossoms about with them in their houses and streets.

The Hebrew word *habhazzeleth* is explained in one of the Targums, early Aramaic paraphrases of the Old Testament, by narcissus, and as it is

used in conjunction with *shûsan*—*i.e.*, flowers of the lily kind—the probability of this being the right translation is increased.

For 'a rose-plant in Jericho' (Ecclus. xxiv. 14, xxxix. 13: 'Hearken unto me, ye holy children, and bud forth as a rose growing by the brook of the field') several suggestions have been made—the oleander, as mentioned above; the *Rosa Phœnicia*, which Dr. Post considers may have been found there, though he has not himself seen it; or a cultivated variety, roses having been grown and loved in Palestine for many centuries. On the whole, the oleander seems more probable, for the first reference of the Son of Sirach is obviously to a tall plant, and the second speaks of the rose as 'growing by the brook,' the favourite locality of the oleander.

There are seven species of roses, of which *Rosa Phœnicia*, with panicled white flowers, is common in all cultivated parts of the country; the others are found only in the north and in Alpine and mountain regions.

The railway-line nearing Jerusalem passes through the Wâdy el Ward or Valley of Roses, so named from the roses which are cultivated there for the manufacture of the favourite Eastern perfume attar of Roses.

Rock roses, white and rose-coloured, *Cistus salviæfolius* and *C. vitlosus*, gleam in shining

VII.—ASPHODELUS RAMOSUS: WHITE ASPHODEL.

VIII.—ASPHODELINE LUTEA.

To face page 8.

masses in the hill districts. *C. Creticus* (see Illustration XII.) is the common form in the southern hills. The cistus has also been held to be the rose of Sharon by some authorities, but the difficulty remains that it is always a dweller in the hills. From the cistus is collected the ladanum (Gen. xxxvii. 25), erroneously translated 'myrrh,' a balsam once much esteemed in pharmacy. The 'rose of Jericho,' *Anastatica hierochuntina*, is a small annual with leaves like a lycopodium and white flowers; it curls up into a ball, but when put into water will expand again, hence its name 'Resurrection flower.' This plant is a vagrant; it has no fixed habitation, but is blown about on the sandy plains by the Dead Sea.

The greenish-white flowers of the 'Star-of-Bethlehem,' *Ornithogallum umbellatum*, are everywhere abundant; a stray specimen may be found even in the Temple area at Jerusalem. There are also many kinds of *Allium*, including onions, mentioned among the vegetables of Egypt (Num. xi. 5), shallots, leeks, and ornamental varieties, as the well-known *A. Neapolitanum* (see Illustration XIII.), etc. Another characteristic flower is the iris, the small blue *I. reticulata* in Galilee, Bashan, and Gilead; *I. Palæstina*, universally found; the yellow flag *I. pseudo-acorus*, in wet places; *I. vartini* (see Illustration XIV.), lavender or blue, near Nazareth; *I. Germanica*, and many other beautiful species,

in Gilead and other parts. The grape hyacinth, *Muscari racemosum*, grows everywhere, and the tall blue spikes of *Scilla hyacinthoides* in all the littoral districts. *Hyacinthus orientalis*, the single blue hyacinth, the parent of the many varieties in cultivation, is found on the lower slopes of Lebanon towards Sidon.

Sir M. Grant Duff speaks of 'enormous masses of *Chrysanthemum segetum*' (corn marigold) on the way from Northern Syria to the plain of Esdraelon, and of a 'whole hill-side painted greyish-blue with the foliage and flowers of an echium.'

Several kinds of *Onosma* (golden drop) swing their yellow bells in all parts of the country, *O. echioides* (see Illustration XV.) in the Galilean and Moabite hills, *O. giganteum* in Jerusalem and Esdraelon.

Water-lilies, white and yellow, grow in still water, especially on Lake Huleh—

> 'Those virgin lilies all the night
> Bathing their beauties in the lake,
> That they may rise more fresh and bright
> When their beloved sun's awake.'

There are striking varieties of the broom-rape, *Orobanche*, a herbaceous, parasitical plant, to be found in Palestine; *Phelipæa cærulea* on Mount Carmel and Lebanon; *P. lutea*, 'like a flaming torch,' in South Judæa, Hebron, and the Jordan Valley; *P. ramosa* (see Illustration XVI.), with

IX.—EREMURUS SPECTABILIS.

X.—NERIUM OLEANDER : PINK OLEANDER.

To face page 10.

violet or yellow flowers, general in Lebanon and Gilead; *Orobanche Palæstina* in Jerusalem and Gerizim, also two gorgeous species—one with deep chrome-yellow and the other with purple flowers, described, but not identified, by Canon Tristram east and north-east of the Dead Sea, etc.

Italian honeysuckle, *Lonicera Etrusca*, climbs on the brushwood throughout the hill districts from Hebron to Lebanon, and traveller's joy, *Clematis vitalba*, on the coast and hills.

Varieties of brilliant tulips are plentiful all over the country, the blue mountain lily, *Ixiolirion montanum*, on hills and in fields. Sir M. Grant Duff observed crocuses and merendera in December on the hill behind Nazareth. They are abundant in spring, yellow, white, and blue; and the saffron crocus, *Crocus sativus*, valued for its perfume, is identified with the Hebrew *karkom*, translated 'saffron,' in Cant. iv. 14.

The saffron of commerce consists of the orange-coloured stigmas and part of the styles of the flowers, and is collected by the peasants; it is used as an ingredient for flavouring and colouring in medicine and cooking, and is pounded in a mortar and made into cakes for the Eastern bazaars.

Another writer describes pink and purple colchicums in October.

The mandrake, *Mandragora officinarum*, is

abundant in Palestine, and has broad leaves lying flat; deep blue flowers which appear in January; a yellow, pulpy fruit; and a thick, fleshy, often forked root. It has poisonous qualities, and was used medicinally in olden times, and many superstitions are connected with it. Josephus says that the Jews used to tie a dog to a plant to pull it out of the ground, as it was certain death to a man to touch it without due precautions. The mandrake shrieked and the dog died, but the plant was afterwards harmless to anyone who touched it.

The spikenard of Cant. iv. 14 ('Spikenard and saffron, calamus and cinnamon, with all trees of frankincense') and of St. John xii. 3, etc., is said by Sir William Jones to be drawn from the lower part of the stem of a valerian, to which, on his discovery of it, De Candolle gave the name of *Nardostachys jatamansi*. The plant had been so jealously guarded by the growers that till then nothing was known about its origin. Commercial spikenard looks like a bundle of ermine tails; each tail is a stem covered with fibres remaining from decayed leaves.

Ricotia lunaria, peculiar to Palestine, is a delicate little pink crucifer, growing in great abundance in Galilee and the Jordan Valley.

Nigella sativa (see Illustration XVII.), the 'fitches' of Isa. xxviii. 25, 27 ('When he hath

XI.—NARCISSUS TAZETTA.

XII.—CISTUS CRETICUS: PINK ROCK-ROSE.

To face page 12.

made plain the face thereof doth he not cast in the fitches'), grows about 1½ feet high, and has blue flowers, fennel-like leaves, and black, acrid, aromatic seeds, which are used in medicine and as food spread on bread or cakes.* The common name for *Nigella damascena* is 'Love in a mist.'

The coriander seed of Exod. xvi. 31 ('And the house of Israel called the name thereof manna, and it was like coriander seed, white') is the globular fruit of an umbelliferous plant with white flowers called *Coriandrum sativum.*

The Hebrew word *maluach,* translated 'mallow' in Job xxx. 4 ('Who cut up mallows by the bushes for their meats'), is now generally understood as the sea-purslane (*Atriplex halimus*) ; it is a perennial shrub sometimes attaining a height of 10 feet, with silvery white leaves and densely-spiked, small purple flowers. It grows in salt marshes, and was said by Dioscorides to have been used as a vegetable. There are several varieties of mallows in Palestine, and the leaves of some of them are still used as a vegetable by Arabs and Jews.

There are many different kinds of reeds, rushes, and beautiful grasses. Mr. John MacGregor, in his 'Rob Roy on the Jordan,' describes the masses of Egyptian papyrus (*Cyperus papyrus*) (see Frontis-

* An Arab proverb says : 'In the black seed is the medicine for every disease.'

piece) at the mouth of the Jordan discovered by him on the northern side of the waters of Merom: 'At this place the papyrus is of the richest green . . . and so close is its forest of stems and dark recurving hair-like tops above, that no bird can fly into it.' It is understood as the bulrush of Exod. ii. 3 ('She took for him an ark of bulrushes'), and the rush of Job viii. 11 ('Can the rush grow up without mire? Can the flag grow without water?'). The 'flag' of the same verse is probably the edible rush, *Cyperus esculentus*, or the flowering rush, *Butomus umbellatus*.

The 'reed shaken with the wind' (Matt. xi. 7) is identified with the *Arundo donax* (see Illustration XVIII.), a tall cane growing 12 feet high, with broad glaucous leaves and a bushy blossom, which bends before the wind. The same plant is mentioned in Isa. lviii. 5, 'Is it to bow down his head as a bulrush?' It abounds on the banks of the Jordan.

Several Hebrew words are rendered 'grass': that in Num. xxii. 4 means green herbage; in Gen. i. 11, green grass as distinct from herbs; and in Isa. xxxv. 7, fodder for cattle. There are more than seventy species, including the short down grass of the limestone hills and the rank growth of the Jordan Valley.

Hay in Prov. xxvii. 25 means stems of grass; hay is not made in Palestine.

XIII.—ALLIUM NEAPOLITANUM.

XIV.—IRIS VARTINI: PALE BLUE IRIS.

To face page 14.

The sweet calamus of Exod. xxx. 23 ('Take thou also unto thee principal spices . . . and of sweet calamus two hundred and fifty shekels') and the sweet cane of Isa. xliii. 24 ('Thou hast bought me no sweet cane with money') probably referred to an essence extracted from an aromatic reed, perhaps the *Andropagon shœnanthus*.

'Wormwood,' so often used metaphorically in the Bible (Deut. xxix. 18: 'Lest there should be among you a root that beareth gall and wormwood,' etc.), is *Artemisia Judaica*. It has much-divided leaves, yellow flowers formed in panicles, and a bitter, disagreeable taste.

The galbanum of Exod. xxx. 34 ('Take unto thee sweet spices, stacte, and onycha, and galbanum'—ingredients of the holy incense) was a resin extracted—according to several authorities—from an umbelliferous plant, *Galbanum officinale*, of the nature of fennel.*

The gourd which sheltered Jonah (Jonah iv. 5-9: 'And the Lord God prepared a gourd and made it to come up over Jonah') is supposed to have been the *Cucurbita lagenaria* (see Illustration XIX.), or trailing bottle-gourd, still planted in the summer to climb over trellis-work arbours, to which the inhabitants of Sidon and Northern Palestine retire as a refuge from the heat of the sun.

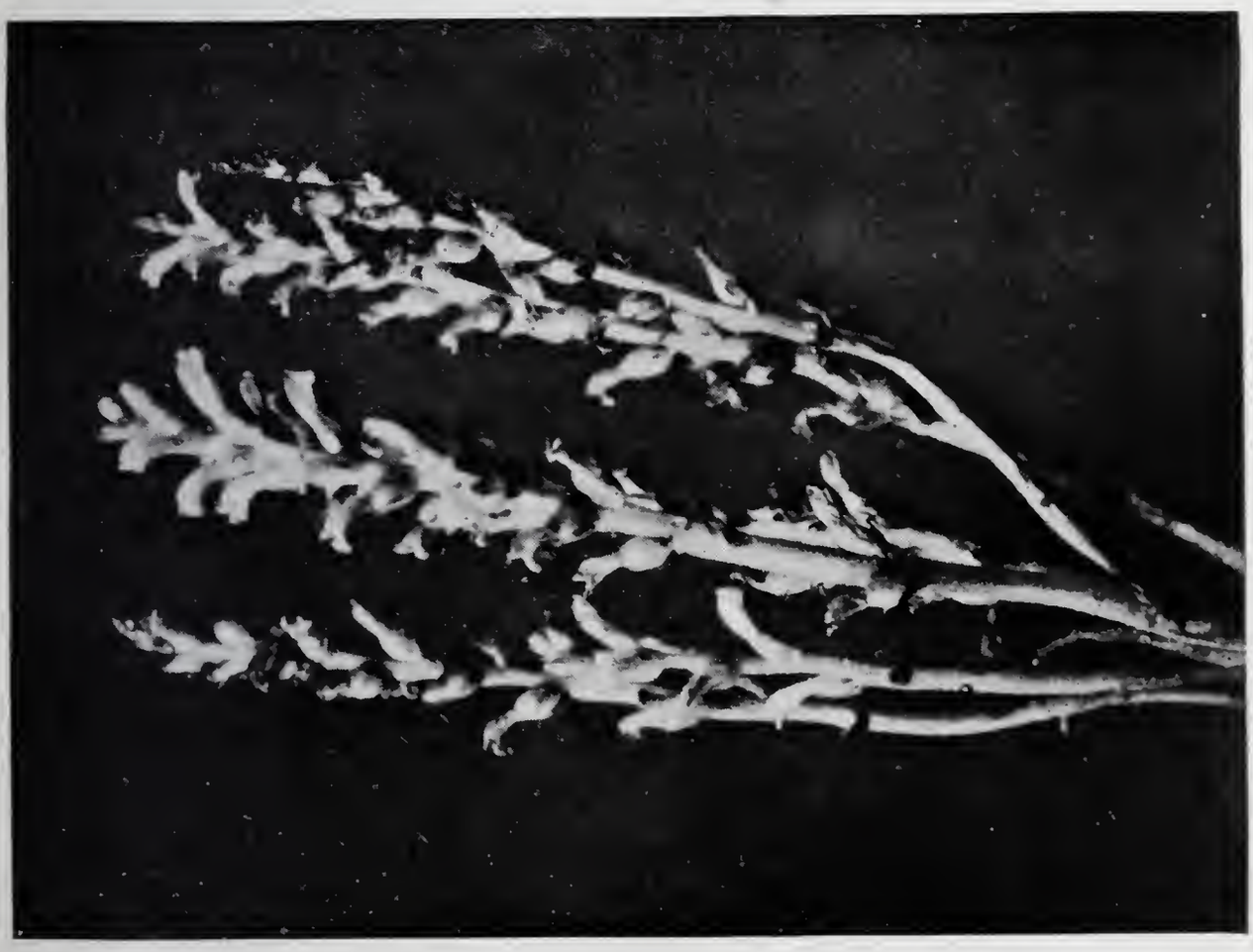
* Pliny says galbanum was obtained from a kind of giant fennel growing in Amanus ('Natural History,' xii., 56). That from Persia is produced from *Ferula galbaniflua*.

Barley, millet, wheat, and spelt are grown, and there are many Hebrew words which describe corn in different states: Num. xviii. 27, corn in the abstract; Judg. xv. 5, standing corn; Gen. xli. 49, grain or winnowed corn, gathered by Joseph as 'the sand of the sea' in the seven plenteous years; Ruth ii. 2, ears of corn; Ruth ii. 7, sheaves of corn, etc. The 'tares' of Matt. xiii. signifies the bearded darnel, *Lolium temulentum*, a kind of rye-grass, with poisonous seeds, which resembles wheat. The 'rye' of Exod. ix. 32 Canon Tristram believed to be spelt, a plant something like wheat.

Various leguminous plants are grown, and used in flour and as vegetables: beans, *Vicia faba* (2 Sam. xvii. 28); pulse, in the same verse, probably peas (the Hebrew word only means parched); lentiles, *Ervum lens*, a species of vetch, of which Jacob's red pottage was made, etc. There are also many pretty wild varieties of vetch generally distributed, as the yellow vetch, and *Vicia canescens*, with blue and white racemes of flowers, on Lebanon.

The word 'cotton' does not appear in the A.V., but the hangings of King Ahasuerus' palace, referred to in Esth. i. 6—'white, green, and blue, fastened with cords of fine linen and purple'—were made of that material. The cotton plant, *Gossypium herbaceum*, is now largely cultivated, and was imported from India.

XV.—ONOSMA ECHIOIDES: GOLDEN DROP.



XVI.—PHELIPÆA RAMOSA: YELLOW AND VIOLET BROOMRAPE.

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The cockle of Job xxxi. 40 is uncertain. Canon Tristram says the root of the Hebrew word might imply any 'noisome weed,' as the 'tares' of the New Testament or the fœtid arums of Galilee, or the smut that attacks corn. The same word is translated 'wild grapes' in Isa. v. 2, 4. Gall, of Jer. ix. 15, and often used in connection with wormwood, may mean any poisonous bitter herb.

Mint, *Mentha sativa* and *sylvestris*, grows wild, and is cultivated in Palestine. It was one of the 'bitter herbs' of the Paschal Feast; others were lettuce, endive, chicory, horehound, beet, etc.; these are still eaten as salads by the natives.

Anise is incorrectly translated in the New Testament (Matt. xxiii. 23). It should be dill (*Anethum graveolens*), a small fennel-like umbelliferous plant with aromatic seeds used in medicine and for seasoning, and subject to tithe in the Talmud.

Cummin (Isa. xxviii. 25: 'Doth he [the plowman] not cast abroad the fitches and scatter the cummin?') is also an umbelliferous plant resembling fennel, of which the fruits, like caraway-seeds 'beaten out with a rod,' are used as spices and medicine.

Rue, another of the common garden herbs tithed by the Pharisees, is generally cultivated. There are four species of it.

By far the larger number of Palestine plants are identical with those of the Mediterranean region. There are, however, considerable exceptions to be found in the flora of the neighbourhood of the Dead Sea, and in that of Lebanon and Hermon, both of which will be noticed later on.

XVII.—NIGELLA SATIVA: FENNEL-FLOWER; 'FITCHES.'

XVIII.—ARUNDO DONAX: 'REED.'

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CHAPTER II

THORNY PLANTS

'For thistels sharpe of many maners,
Netlis, thornes, and crooked briers,
For moche they distroubled me,
For sore I dradéd to harméd be.'

CHAUCER.

THE traveller in Palestine, especially should he be a botanist and collect specimens with ungloved hands, cannot fail to remark the number of plants provided with a natural defence in the shape of thorns and prickles. First may be mentioned the Christ's-thorn (*Paliurus aculeatus*) (see Illustration XX.), the 'briers' of Isa. vii. 24: 'Because all the land shall become briers and thorns.' It has flexible boughs, small shiny leaves like the olive, a little yellow flower, and a dry seed-case which is like a head wearing a broad-brimmed hat, whence comes its French name *Porte Chapeau*. From its branches the crown of thorns is supposed to have been made.

The zizyphus (*Spina-Christi*), which also has pliant boughs and strong thorns, has been mentioned in the same connection.

The pink-flowered *Rubus fruticosus* (common bramble), *Ruscus aculeatus* (butcher's-broom), *Juniperus*, *Centaurea calcitropa* (a kind of knapweed or thistle), *Rhamnus oleoides* (buckthorn), *Rubia tinctorum* (madder—a shrubby perennial herb with globular fruit), *Emex spinosus* (a salt-marsh annual), *Notobasis Syriaca* (the Syrian thistle, which grows to a gigantic size), *Carthamus oxyacanthus* (the yellow flowering thistle), several varieties of *Echinops* (globe thistle), and many others, are all more or less formidably armed.

The *Solanum sodomæum*, identified with the so-called 'apple of Sodom,' has prickly stems, and flowers and fruit like a potato, and is used as a hedge (Prov. xv. 19: 'An hedge of thorns'). It grows in the hot valleys. The *Opuntia vulgaris* (prickly pear), conspicuous amongst the Palestine flora, is valuable as a hedge in villages and enclosures, and presents an aggressive front to the invader, not to be defied with impunity.

In the neighbourhood of the Sea of Galilee, and in many other places, there is a tangle of thorny shrubs and plants. Prominent amongst these is the thorny burnet (*Poterium spinosum*), with

XIX.—CUCURBITA LAGENARIA: BOTTLE-GOURD.

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XX.—PALIURUS ACULEATUS: CHRIST'S-THORN.

small serrated leaves, deep red blossoms, and sharp thorns.

It gives its name to a district in Hermon, and a large proportion of the lime produced in Palestine is burned with this shrub, which is 'cut up' (Isa. xxxiii. 12) with pruning-hooks. This and other thorns are also used in ovens and for culinary purposes (Eccles. vii. 6: 'As the crackling of thorns under a pot, so is the laughter of the fool;' and Ps. cxviii. 12).

Canon Tristram says there are from eighteeen to twenty-two Hebrew words used in the Bible to express prickly shrubs or weeds which have been indifferently translated in the Authorized Version by 'bramble,' 'brier,' 'thistle,' and 'thorn,' and cannot easily be identified. Thus there is the 'bramble' of Judg. ix. 14, which occurs in Jotham's parable of the trees choosing a king, probably *Lycium Europæum,* the box-thorn, often used as a hedge-plant; and the bramble of Isa. xxxiv. 13, supposed to mean one of the many thistles (*Notobasis Syriaca, Scolymus maculatus,* or *Carthamus oxyacanthus,* which are especially abundant on the plains. The 'thistle' of Gen. iii. 18 is believed to be *Centaurea calcitropa,* the star-thistle. Many of these thistles, which grow from 10 to 15 feet high, and briers, are very decided obstructionists to travellers who leave the beaten track, and are consequently

described as 'noxious thorny plants.' Some of the eryngiums, especially *E. Creticum* (see Illustration XXI.), and the *Scolymus Hispanicus*, another thistle with prickly leaves and yellow flowers, are, however, handsome showy herbs.

Dr. Post gives an amusing account of the various animals making the best of circumstances and actually enjoying their food, flocks of goats browsing on prickly eryngiums, the camel dealing with the noli-me-tangere spheres of the *Echinops* (globe thistle) and the thorny plates of the Indian fig. He adds : 'Owners of asses thresh out various species of thistles and thorns, and use them for feeding their beasts. It is probably in allusion to this custom that Gideon is said to have *taught* (threshed) the men of Succoth (along) with thorns of the wilderness and briers' (*Rubus fruticosus*, the common bramble).*

The thorny caper, *Capparis spinosa* (see Illustration XXII.), is generally understood now to be the hyssop of Scripture (Exod. xii. 22, etc. : 'And ye shall take a bunch of hyssop and dip it in the blood that is in the bason and strike the lintel'), referred to in 1 Kings iv. 33 as 'the hyssop that springeth out of the wall.' It has simple leaves with two thorns at their base, white flowers with purple filaments, succeeded by a berry. The

* The bramble is especially abundant along Gideon's route.—CANON TRISTRAM.

XXI.—ERYNGIUM CRETICUM : ERYNGO.

XXII.—CAPPARIS SPINOSA : THE CAPER ; 'HYSSOP.'

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flower-buds and unripe fruit are preserved in vinegar and called capers.

In rocky, dry, and parched neighbourhoods plants develop thorns more readily, and the large group of *Astragalus*, quite harmless in Switzerland and other countries, arm themselves in Palestine with ferocious spines. Struggling against adverse circumstances, they run to thorns instead of developing succulent branches and flowers, 'which things are an allegory.'

The 'spicery' of Gen. xxxvii. 25 is believed to be the product of some shrub, probably the gum tragacanth obtained from *Astragalus gummifer*.

There are at least seventy-four species of *Astragalus*, some of which are found all over the country—in the southern desert, by the Dead Sea, on the plains, and in the Alpine regions of Lebanon and Anti-Lebanon up to 9,000 feet. In the mountains acres of ground are covered by thorny *Astragalus* (*A. Mollis*—see Illustration XXIII.).

The 'nettles' of Isa. xxxiv. 13 are stinging-nettles, which flourish in great size and variety. At Tiberias there is a pretty variegated species. In Prov. xxiv. 30, 31, 'nettles had covered the face thereof'—that is, the 'field of the slothful, and the vineyard of the man void of understanding—the Hebrew word is different, and Canon Tristram thinks it was probably the prickly

acanthus. In this case the field or vineyard must have presented a very picturesque appearance, though the crop would not be lucrative. This plant, *Acanthus Syriacus*, also called *Spinosus* a much more prickly variety than the *Mollis* of Italy, is common in dry places (see Illustration XXIV.).

XXIII.—ASTRAGALUS MOLLIS: MILK VETCH.

XXIV.—ACANTHUS SYRIACUS.

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CHAPTER III

TROPICAL AND ALPINE PLANTS

IN the neighbourhood of the Dead Sea, which lies nearly 1,300 feet below the level of the Mediterranean Sea, are barren plains strewn with sand, gypsum, sulphur, and salt. On these there is but little vegetation, with the exception of tamarisks, thorn-bushes, and salt-wort. In this perennially hot climate there are, however, oases of verdure watered by the streams which flow into the salt sea, where tropical and sub-tropical trees and plants grow luxuriantly. These appear to be chiefly of Ethiopian origin, with a few common European forms of wide distribution and a slight Indian admixture.

The question then arises, How did they find their way there? Canon Tristram says that to answer this it is necessary to trace the geological history. His theory is that there was a time before the glacial period when the climate of the whole country was much warmer than it is now,

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and that the Ethiopian flora then had a more northerly extension.

When the great Miocene sea covered the Mediterranean and Western Europe, Miocene land extended, it would appear, south and west of this from Southern Asia to the Azores. There was then either contiguous or closely contiguous land, which enabled Palestine to be stocked from Abyssinia. In the period of cold which closed the Pliocene, 'those species which were more tenacious of life, retiring to the depression of the Jordan Valley—then as now proportionately warmer than the surrounding land—contrived to maintain the struggle for existence, and have survived to the present day, and form a tropical outlier of which we have no terrestrial instance.'

Among tropical species may be mentioned the date-palm; castor-oil plant (*Ricinus communis*) (see Illustration XXV.); *Haplophyllum tuberculatum*, belonging to a species of perennial plants or shrubs; Jew's-mallow (*Corchorus tricolaris*), an annual plant growing 10 or 12 feet high, with a straight, cylindrical stem, tapering leaves about 6 inches long, yellow flowers in clusters of two or three, and a cylindrical fruit; *Abutilon fruticosum* and *muticum;* two splendid varieties of orobanche, already noticed; *Cassia obovata*, with handsome foliage and conspicuous yellow flowers; *Achyranthes aspera*, shrubs with herbaceous stems

XXV.—RICINUS COMMUNIS: CASTOR-OIL PLANT.

XXVI.—GYPSOPHILA LIBANOTICA.

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and branches, and flowers in loose spikes; and *Ærva Javanica*, white woolly perennial herbs or shrubs with alternate leaves and snowy white flowers; the last two species of Amaranthacæ.

Calotropis procera, a white-flowered shrub from the silken down of the heads of which a soft kind of cloth is made, has been suggested as the Sodom vine, but scholars have now decided in favour of the *Citrullus colocynthis* (colocynth), which has tendrils like a vine, and a beautiful fruit, nauseous to the taste (Deut. xxxii. 32: 'For their vine is of the vine of Sodom and of the fields of Gomorrah'). The colocynth is also supposed to have been the wild gourd of 2 Kings iv. 39, gathered in mistake for melons by one of the prophets during the dearth in Gilgal, and 'shred into the pot of pottage,' thereby making it uneatable.

There are several other beautiful asclepiads, as *Gomphocarpus fruticosus*, with showy flowers; *Solenostemma argel*, with white, fleshy leaves and white umbellate flowers, etc.

The potash produced from *Salsola kali* and other alkaline plants which abound in the maritime marshes and round the Dead Sea, has been used with olive-oil in the manufacture of soap from very ancient times. The word 'alkali' comes from the Arabic name for the plant.

Momordica balsamina, with lobed or compound

leaves, and orange or red fruits, and *Cucumis prophetarum* (the globe cucumber), also grow by the Dead Sea; the last two of the order Cucurbitacæ, the cucumber and gourd family.

Two species of indigo-plant, *Indigofera argentia* and *I. tinctoria*, are cultivated on the east side of the Dead Sea—leguminous plants with rose-purple, blue, or white flowers, and long, narrow pods. *Salvadora Persica*, only found close to the Dead Sea, is interesting as being by some commentators identified as the mustard-tree of Scripture; others accept the mustard-shrub *Sinapis nigra*, which in Syria reaches a height of twelve or fifteen feet, and has very small seeds.

Sesamum indicum, an annual herb with opposite or alternate leaves and yellow or pink flowers, is semi-spontaneous, and is cultivated for the sake of its oily seeds, which contain a fixed oil as tasteless as olive-oil.

On Mount Hermon and Lebanon, on the other hand, certain Alpine and sub-alpine trees and flowers are found. Such are the cedar, Pyrenean pine, juniper, and common rhododendron; and amongst flowers, *Centaurea axillaris*, *Silene* (*pruinosa*, *subulata*, and *odontopetala*), *Dianthus libanotis*, *Viola libanotica* and *biflora*, *Fritillaria crassifolia*. var. *hermonis*, *Colchicum libanoticum*, *Crocus hermoneus*, *Ranunculus demissus*. *Corydalis rutæfolia*, resembling fumitory, *Geranium*

subcaulescens, Sedum glaucum, Androsace villosa, Gypsophila libanotica (see Illustration XXVI.), *Veronica biloba, Alyssum alpestre*, etc.

There are, however, not nearly so many Alpine flowers as might be expected, and the vegetation of the heights of Lebanon is not the same as that of the Alps of Europe and India, but is peculiar to itself. Three hundred flowers of the Arctic Circle inhabit the ranges of Northern India, while not half that number are found on Lebanon.* Sir J. D. Hooker says the reasons for this may be found in the heat and extreme dryness of the climate for much of the year, in the desiccating winds, and in the sterile nature of the dry limestone soil.

Spring is pre-eminently the time for flowers in Palestine; when the 'latter rain' is over 'the flowers appear on the earth,' and are in perfection for about a month. This may begin about the middle of March, or it may be later should the rain delay its coming. Still, the summer has its flowers, and even in December and January narcissus, cyclamen, crocus, squills, the smaller iris, and an occasional anemone, etc., can be found, and golden samphire on the maritime plains.

* Canon Tristram.

CHAPTER IV

TREES

'Against the liquid sky
Dark fir-trees stand,
Still fingers pointing out
A distant land.'

THE trees of Palestine, like the flowers, range from Alpine to tropical species. Most of those mentioned in the Bible are still to be found, though some are scarce.

The date-palm, *Phœnix dactylifera* (Exod. xv. 27; St. John xii. 13), was from earliest times associated with Palestine, and was the symbol on its coinage. It is still abundant at Beyrout, but has almost disappeared from Jericho and other places.

Many passages in the Bible show that palm-trees were far more plentiful in old times than at the present day. Jericho was called the city of palm-trees; Phœnicia, Hazazon-Tamar, by the Dead Sea, and other towns, were named from them. Palms were luxuriant at Jericho, in the

XXVII.—PUNICA GRANATUM: POMEGRANATE.

XXVIII.—CEDRUS LIBANI: CEDAR OF LEBANON.

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ravine of the Jordan, round the Sea of Galilee, and in other places, and masses of them are found on the shores of the Dead Sea tossed up by the waves, the pathetic tree skeletons of the giants of bygone years.

The olive, one of the earliest trees mentioned, still constitutes one of the chief industries, and is largely grown for the fruit and oil; the oldest trees are at Gethsemane (Gen. viii. 11; 2 Sam. xv. 30).

'Prodigal in oil
And hoary to the wind.'

The vine, the emblem of the nation, is also very abundant, and in the same districts as of old. The hills about Jezreel, where was Naboth's vineyard, are still celebrated for their vines, and in the Valley of Eshcol may be seen to this day the great 'clusters of grapes' (Num. xiii. 23, 24).

The fig is indigenous to Syria, and cultivated all over the country. The hollow succulent fruit is very curious, as it contains the imperfect flower concealed within it. There are four Hebrew words to designate the fig, of which *debelah* means the 'cake of dried figs' which was stored for winter use (1 Sam. xxv. 18).

The pomegranate (see Illustration XXVII.), *Punica granatum* (Deut. viii. 8: 'For the Lord thy God bringeth thee into a good land . . . a land of wheat . . . and pomegranates'), a shrub-like

tree with bright red or white blossoms and globular fruit, is cultivated everywhere. The pomegranate was used as a design for decoration in architecture, and for the sacred garments of the priests.

The 'teil-tree' (oak), *Pistachio Palæstina* (Isa. vi. 13: 'As a teil-tree and as an oak'), grows on the lower slopes of hills throughout the country. Six Hebrew words have been translated 'oak.' *Eláh*, the teil, terebinth, or turpentine tree, is rightly translated in the above passage. The other five words refer to the acorn-bearing oaks.

The teil-tree resembles the oak in the grain of the wood and in its spreading growth, but the dark reddish-green pinnated leaves are quite different, and it has small clustering flowers and red berries.

The mastic-tree, *Pistacia lentiscus* ('Hist. of Sus.,' v. 54), is a small tree with evergreen pinnate leaves without terminal leaflet; the bark exudes a resin called mastic.

Another tree of the same order is *Pistacia vera*, which yields the pistachio nuts (Gen. xliii. 11: 'Carry down the man a present, a little balm, and a little honey, spices, and myrrh, *nuts* and almonds').

The cedar (Hebrew name *erez*, used in the Bible for all pines) is found in the Lebanon district (Ps. civ. 16: 'The cedars of Lebanon which He hath planted'). (See Illustration XXVIII.)

The fir may be the *Pinus halepensis* (Isa. xxxvii. 24: 'I will cut down the tall cedars thereof and the choice fir trees thereof'); it was used in building the temple and for other purposes.*

The walnut (Cant. vi. 11) is found in the lower slopes of Lebanon and Hermon, and is cultivated in Galilee.

The Shittah-tree, the timber from which was used for the tabernacle (Shittim wood), is supposed to have been the *Acacia seyal,* as that is the only timber-tree of any size in the desert of Arabia.

Acacia nilotica (Exod. iii. 2, 4), the 'burning bush,' grows by the Dead Sea. *Sinah,* the Hebrew word, gives the name Sinai, the wilderness of 'sin' or the Sinah. Another acacia is the *farnesiana,* with golden-yellow scented flowers. Four varieties at least of poplar are found; that mentioned in Gen. xxx. 37 and Hosea iv. 13 is supposed to be the white poplar.

The beautiful storax-tree (*Styrax officinale*), from the bark of which comes stacte, another ingredient in the holy incense (Exod. xxx. 34: 'Take unto thee sweet spices, *stacte,*† and onycha, and galbanum'), is abundant on the lower hills. It has fragrant white flowers, with yellow stamens

* Rendered in the LXX by 'pine,' 'cypress,' and 'juniper,' and probably including these.

† Dioscorides describes two kinds of stacte, one of which is pure myrrh, and the other made from storax.

like orange-blossom, and dark green leaves, silver on the under side. I have seen this and the hawthorn in full flower together in the woods between Haifa and Nazareth in the middle of March.

Another flowering tree is the almond (*Amygdalus communis*). Aaron's rod was from this tree, and it is also referred to in Jer. i. 11, 12: 'Moreover the word of the Lord came unto me, saying, Jeremiah, what seest thou? And I said, I see a rod of an almond [*shakêd*] tree . . . for I will hasten [*shakêd*] my word to perform it.'

From the flower of the almond was taken the shape for the seven-branched candlestick, and the blossom, white in the distance, is compared to the silvery hair of old age in Eccles. xii. 5. It clothes the hill-slopes, especially on the Mount of Olives, and mingles with the peach-blossom near Nablous (Shechem). There are several wild varieties. The pear-tree also is wild in Galilee.

The apple-tree of Canticles and of Joel i. 12 is uncertain, but is supposed by Canon Tristram to mean the apricot (*Armeniaca vulgaris*), which was naturalized from very early times. Dr. Post believes the 'apple' to have been the quince, which is, as he truly remarks, 'unpleasing to the taste of Europeans,' but is eaten with relish by many in the East. He considers that it fulfils all the conditions—a shady tree, with golden-coloured, fragrant fruit pleasant to the taste. The

citron, with its aromatic fragrance, seems more likely to be correct. The peach (*Persica vulgaris*) has been introduced, probably from Persia.

Orange, lemon, and citron trees are largely grown in Jaffa, Jericho, and other places. The expression, 'boughs [or fruits] of goodly trees' (Lev. xxiii. 40), is taken by the Aramaic paraphrase and the Rabbis to mean 'fruit of the citron-trees,' which is still used, according to the enactment on the Feast of Tabernacles (Farrar's 'Life of Christ,' vol. ii., p. 57). The citron is said to be the most common of the orange tribe in Palestine.

The true balm of Gilead (Gen. xxxvii. 25: 'The Ishmaelites came from Gilead with their camels bearing spicery and balm'; and Jer. viii. 22) is supposed to be the *Balsamodendron Gileadense*, which has scanty foliage, small green flowers, oval fruit, and a thick, hard nut. Josephus says the Jews believed that the Queen of Sheba, who doubtless had botanical gardens in many places, gave Solomon a root of this tree, and it was once cultivated by him in the tropical plain of Jericho, but is now lost. The monks of Jericho regard the *Balanites Ægypticea* as the balm. They prepare an oily gum from the fruit, which is sold in tin cases to travellers as the balm of Gilead. The *Pistacia lentiscus* or *mastic* has also been suggested.

The healing gum-resin is procured from bal-

samodendron and mastic trees by incisions in the bark.

Myrrh, an ingredient in the holy oil (Exod. xxx. 23), is the gum from the bark of another species of balsamodendron (*B. myrrha*).*

The 'camphire' of Cant. i. 14 is the 'henna' of the Arabs (*Lawsonia alba*). The crushed leaves of this shrub have been used as a cosmetic from ancient times. The leaves are smooth, oval, and lance-shaped, the small white flowers in panicles, and so sweet-scented that the shrub has been called Jamaica mignonette.

The myrtle, *Myrtus communis* (Isa. lv. 13: 'Instead of the brier shall come up the myrtle-tree'), grows 20 feet high. The 'thick trees' of Lev. xxiii. 40 are interpreted of the myrtle, which is still used for making booths. (See Illustration XXIX.)

The locust or carob tree (*Ceratonia siliqua*), alluded to in Luke xv. 16 under the name of 'husks'—'the husks that the swine did eat'—is found everywhere except on the highest hills. It grows to about 30 feet, and has pinnate leaves of a shiny dark green colour. The flowers are in small red racemes, and are succeeded by long flat dark brown pods containing a number of small seeds, and a sweet juice.

* Dioscorides gives a 'stacte' made from myrrh as well as that of the storax-tree.

XXIX.—MYRTUS COMMUNIS: MYRTLE.

XXX.—ELÆAGNUS ANGUSTIFOLIA: OLEASTER; 'OIL-TREE.'

To face page 36.

There are several varieties of oaks. *Quercus pseudo-coccifera* is the most common, and is supposed to be that mentioned in Ezek. vi. 13: 'Then shall ye know that I am the Lord, when their slain men shall be among their idols round about their altars . . . and under every thick oak.'

The bay-tree, *Laurus nobilis* (Ps. xxxvii.: 'I have seen the wicked in great power and spreading himself like a green bay-tree'), grows in Carmel, Tabor, and Gilead.

The oleaster is abundant. The Hebrew name *Etz schemen* is translated 'oil-tree' ('I will plant in the wilderness the cedar, the shittah tree, and the myrtle, and the oil tree') in Isa. xli. 19. It has long narrow bluish leaves, small yellow flowers, and bitter green berries, and yields an inferior oil. (See Illustration XXX.)

The lign-aloes used by Balaam with cedars to illustrate the greatness of Israel are identified with the *Aquilaria Agallocha*, the eagle-wood of the ancients—a noble tree with scented wood and lance-shaped leaves, not now found in Palestine, but which may have grown in the neighbourhood of Jericho. Aloes mentioned in Ps. xlv., and as a spice for embalming in John xix. 39, would be the gum of this tree, an aromatic substance produced from the wood. The almug or algum tree was not indigenous, but was imported by

King Solomon from Ophir (India ?) ; it was probably red sandal-wood.

The sycamore into which Zacchæus climbed was the *Ficus sycamorus,* a species of fig ; it is often planted by the roadside, and has a leaf like the mulberry and a fig-like fruit.

The sycamine of Luke xvii. 6 is the black mulberry, of which the fruit consists of an aggregate of flowers in an oblong spike, the succulent part of the fruit being the fleshy sepals.*

The box-tree is mentioned twice in Isaiah as a forest-tree, with the pine and fir, in xli. 19 and lx. 13. There is a box-tree growing on Lebanon to a height of 20 feet (*Buxus longifolia*) ; or the tree intended may be a juniper.

'Cassia' includes two spice-bearing trees—viz., *Cinnamomum cassia* (*kiddah*), an inferior kind of cinnamon, probably imported from India, and *ketzioth* (Hebrew), which was either the Indian orris or a cassia-bearing tree.

For the 'thyine' or 'sweet-wood' of Rev. xviii. 12, part of the precious merchandise of Babylon, two trees are suggested—'citron-wood,' so called by the Romans, a small tree of the cypress family, by Canon Tristram ; and *Thuja articulata,* a conifer with dark brown fragrant wood, by Dr. Post.

Frankincense is a fragrant gum from the

* Dr. Post.

yagaar or frankincense tree (*Boswellia serrata*). It grows in Arabia, and somewhat resembles the mountain-ash, having long serrated leaves and green star-like lemon-scented flowers.

There are many varieties of willow in Palestine, and two words are thus translated—one in Job xl. 22 and the other in Ezek. xvii. 5. The word 'elm' only occurs once in the Authorized Version (Hosea iv. 13), and is supposed to be an erroneous translation of *elah*, elsewhere rendered 'oak, terebinth,' etc. The elm is grown now, but is believed not to be indigenous.

Heath (Jer. xvii. 6, and xlviii. 6) is identified with the Arabic word for a dwarf juniper with purple berries growing in the most barren parts of the desert ('For he shall be like the heath in the desert, and shall not see when good cometh,' referring to the 'man that trusteth in man').

The word translated 'grove' in Gen. xxi. 33 ('And Abraham planted a grove in Beer-sheba, and called there on the name of the Lord, the everlasting God') is twice rendered 'tree,' and is identified with the tamarisk-tree, of which there are eight species by the Lower Jordan and Dead Sea.

Melia azedarach, one of the mahogany family, is an Indian tree, and is cultivated in Palestine; it is known as the pride-of-India, holy-tree, false sycamore, and bead-tree. It has bipin-

nate leaves, and large bunches of lilac-scented flowers.

Cordia myxa and *Moringa aptera*, two more natives of tropical and subtropical regions, are also grown. The former has an edible fruit, and from the seeds of the latter an aromatic oil is prepared.

Besides these, there are the medlar, hackberry (celtis or nettle-tree), hazel,* hornbeam, service-tree, iron-wood, and *Schinus molle* or pepper-tree.

Bdellium, referred to in Gen. ii. 12, is thought by some authorities to be the gum of a tree growing in Arabia Felix (*Borassus flabelliformis*). It occurs again in Num. xi. 7: 'The manna was as coriander seed, and the colour thereof as the colour of bdellium'—that is, white. It has also been conjectured to be a precious stone.

Gopher, the wood from which the ark was made, has not been translated into English.

Pannag, spoken of as a commodity in Ezek. xxvii. 17 with wheat of Minnith, is also not known. It is rendered as 'millet' in the Syriac version, and has been regarded as a spice or some native product. The LXX considers it to be the name of a place.

There are many scented trees and plants in Palestine. Among the former some of the

* The word translated thus in Gen. xxx. 37 is identical with the Arab name for the almond-tree.

acacias are pre-eminent—the *Acacia vera* in the wilderness and the *farnesiana* on the coast. Besides these are the cedar and terebinth; the storax-tree; the orange, lemon and citron trees; the myrtle, bay, camphire (henna), mahogany tree, etc. And among plants it is difficult to balance the rival claims of the yellow jasmine, lavender, and clematis of Galilee; the oleander and mignonette on the shores of the Lake; the narcissus of Sharon; the saffron crocus, sweet calamus, etc. 'Thy plants are an orchard of pomegranates, with pleasant fruits; camphire with spikenard, spikenard and saffron; calamus and cinnamon, with all trees of frankincense; myrrh and aloes, with all the chief spices.'

It is only possible to glance at the imagery of the Bible drawn from trees and flowers. The palm-tree as a symbol of erect, tall, and graceful stature: 'They are as upright as the palm-tree'; 'This thy stature is like to a palm-tree'; and of prosperity: 'The righteous shall flourish like the palm-tree.' The distress of Zion compared to the withering of trees: 'The vine is dried up and the fig-tree languisheth; the pomegranate-tree, the palm-tree also and the apple-tree, even all the trees of the field are withered: because joy is withered away from the sons of men.'

The olive, vine, and fig tree were always before the eyes of the writers, and appear over and over

again as images of wealth, beauty, and prosperity.

The vine was one of the promised blessings of the Holy Land, the emblem of the nation, as in the parable of the vineyard in Isa. v. Again, in John xv. 1: 'I am the true vine'; and in Rev. xiv. 19: 'The angel . . . gathered the vine of the earth.' Other trees are also spoken of in parable: 'I am like a green fir-tree'; 'Of the oaks of Bashan have they made thine oars'; 'Instead of the thorn shall come up the fir-tree, and instead of the brier shall come up the myrtle-tree'; 'Do men gather grapes of thorns, or figs of thistles?'

To flowers in the same connection there are more references than can be quoted here: 'He cometh forth like a flower'; 'The grass withereth, the flower fadeth'; 'The flowers appear on the earth'; 'As a flower of the field so he flourisheth'; The rose of Sharon, the rose of Jericho, the lily of the valleys, 'he shall grow as the lily,' the lilies of the field, the saffron (crocus), almond blossom, balm, the heath in the wilderness (dwarf juniper), 'hemlock'—thought to be the poppy, darnel or aconite, and wormwood.

There is yet another way by which the trees and plants of Palestine have been indelibly stamped upon the lives of her people—namely, as symbols on the coinage of the country.

The copper half-shekel of Simon Maccabæus

had on the obverse side two bunches of thickly-leaved branches, between which was a citron, and on the reverse side a palm-tree between two baskets filled with dates and other fruits. Another coin of the time of Coponius, the first procurator, during whose governorship our Lord was discovered in the Temple, had on the reverse side a palm-tree, from which hung bunches of dates, and on the obverse side an ear of corn.

A coin of John Hyrcanus had on one side a wreath of olive surrounded by letters setting forth his name and designation, and on the other two cornucopiæ with a poppy-head between them.

A design on one of Herod Agrippa's coins is of two ears of corn growing on one stalk. A coin of Herod Archelaus has a bunch of grapes and a vine-leaf, and one of Herod Antipas a palm-branch. Vespasian's coin issued to commemorate the fall of Jerusalem has a captive Jewess weeping under a palm-tree, and other examples might be given.*

There is no forest conservancy in Palestine, and though there are still some woods left, 'the destruction of trees for firewood threatens in time to reduce these to the same condition with the ancient forest near Jaffa, which now consists of low bushes springing from the roots of former

* 'Coins of the Bible,' by Dr. Williamson.

trees' (Conder). 'The forest of his Carmel' is, however, still represented by some fine trees—pines, holm-oaks, locust-tree, terebinth, Judas-tree, chestnuts, and olives; and the flowering shrubs are exceptionally beautiful there—bay, laurustinus, myrtle, storax, arbutus, etc., and also the wild flowers.

ALPHABETICAL DESCRIPTIVE LIST OF PLANTS AND TREES*

The letter P. after a name signifies that the plant is peculiar to Palestine.

A.

ABUTILON (N.O. *Malvaceæ*): Annual or shrubby plants, often with heart-shaped leaves and pendulous cup-shaped flowers.

A. FRUTICOSUM: By the Dead Sea.

A. MUTICUM: Engedi, Ghor, Safieh (by the Dead Sea).

ACACIA (N.O. *Leguminosæ*): Shrubs or trees with small flowers collected in numbers in heads or spikes; leaves pinnated; small feathery leaflets.

A. ALBIDA: Plain of Phœnicia.

A. FARNESIANA: Strongly scented yellow flowers. On the coast.

A. NILOTICA: Exod. iii. 2, etc. (A.V. 'bush'). Shores of Dead Sea.

A. SEYAL, or VERA (the shittim-tree): A scented variety from which gum-arabic is obtained. Round the Dead Sea.

A. TORTILIS: Southern desert.

ACANTHODIUM SPICATUM (N.O. *Acanthaceæ*): Distinguished from *Acanthus* by a two-celled pod, each cell containing one seed.

ACANTHOLEPIS ORIENTALIS (N.O. *Compositæ*): Annual desert herbs. Plains of Hauran.

* This list contains many more names of plants than the first part of the book, and gives a short description of most of the genera.

ACANTHOLIMON LIBANOTICUM (P.) (N.O. *Plumbaginaceæ*): Plants with rigid sharp-pointed leaves, like those of the juniper; white calyx and rose-coloured flowers. Alpine and subalpine, Lebanon and Anti-Lebanon. Several other species.

ACANTHUS SYRIACUS (N.O. *Acanthaceæ*): Large plants with beautiful foliage and tall leafy bracts in which the whitish flowers are partly concealed. Universal in dry places.

ACER (N.O. *Sapindaceæ*): Common sycamore or maple.

A. SYRIACUM (P.): Many of Upper Lebanon valleys. Four other species and one variety.

ACHILLEA (N.O. *Compositæ*): Plants with deeply divided leaves and clusters of white, yellow, or purple flowers.

A. ODORATA: Lebanon. Twelve other species.

ACHYRANTHES ASPERA (N.O. *Amaranthaceæ*): A shrub with herbaceous stems and branches, and flowers in loose spikes. The Ghor, near Jericho.

ACORUS CALAMUS (N.O. *Araceæ*): Sweet flag. A strongly scented plant with lance-shaped leaves and a long leaf-like stalk from which issues a spike of greenish flowers. Margin of streams.

ACTINOLEMA ERYNGIOIDES (N.O. *Umbelliferæ*): Annual herbs with two- to four-flowered umbels, and involucre with oblong unequal leaves and green flowers. Damascus, etc.

ADDER'S-TONGUE FERN. See OPHIOGLOSSUM.

ADENOCARPUS (N.O. *Leguminosæ*): A handsome plant resembling the English broom.

A. DIVARICATUS: Southern Lebanon, Galilee.

ADIANTUM CAPILLUS-VENERIS (N.O. *Filices*): Maiden-hair fern. In every part of the country where there is dropping moisture, except the mountain regions.

ADONIS (N.O. *Ranunculaceæ*): Annual and perennial plants, with fennel-like leaves cut into numerous segments, and corolla of five to fifteen petals, deep crimson or yellow.

A. ÆSTIVALIS: Small red cup-shaped flowers. Abundant on the plains.

A. AUTUMNALIS: Crimson, orange, or yellow flowers. Under Lebanon.

A. DENTATA: Dwarf, Orange or yellow flowers. On sandy plains. See Illustration III.

A. PALÆSTINA: Red flowers. In every part of the country. See Illustration III. Two other species.

ÆGILOPS (N.O. *Gramineæ*): Genus of grasses allied to wheat.

Æ. OVATA: A grass with large seeds, believed to be the origin of wheat. Mount Tabor. Two other species.

ÆLEUROPUS LÆVIS (N.O. *Gramineæ*): Belongs to a genus of grasses.

ÆRVA JAVANICA (N.O. *Amaranthaceæ*): Alternate-leaved plant with a white tomentose appearance and very small flowers. Wady Zuweirah, Callirrhœ, Dead Sea.

ÆTHIONEMA (N.O. *Cruciferæ*): Closely allied to cress.

Æ. CRISTATUM: Hill country down to Jerusalem. Six other species.

AGRIMONIA EUPATORIA (N.O. *Rosaceæ*): Agrimony. A well-known wayside plant with pinnate leaves and an elongated spike of yellow flowers. Coast and mountain districts.

AGROSTIS SPICA-VENTI (N.O. *Gramineæ*): Bent grass.

AINSWORTHIA CORDATA (N.O. *Umbelliferæ*): Kanebin Valley, Lebanon. Two other species.

AIZOON (N.O. *Ficoideæ*): Prostrate herbaceous plants resembling *Portulaca.*

A. HISPANICUM: Judæan wilderness.

A. CANARIENSE: Wadys, south-east and south-west of Dead Sea.

AJUGA (N.O. *Labiatæ*): Bugle. Inconspicuous herbaceous plants; flowers in whorls or singly in axils of opposite leaves.

A. CHAMÆPITYS: Yellow bugle or ground pine. Seven other species and varieties.

ALBERSIA BLITUM (N.O. *Amaranthaceæ*): Blite. Littoral districts, Jordan Valley.

ALCHEMILLA ARVENSIS (N.O. *Rosaceæ*): Parsley Piert. A small annual plant with jagged leaves and tufts of minute green flowers growing in their axils. Northern coast.

ALDER. See ALNUS.

ALHAGI (N.O. *Leguminosæ*): A genus of shrubby plants with simple leaves, spiny flower-stalks, papilionaceous flowers in clusters, and a stalked, woody pod. A manna-like substance is produced from some of these plants, an exudation from the leaves and branches in the form of drops which harden by exposure to the air. This secretion has by some been identified with the manna of the Israelites.

A. CAMELORUM (var. *Turcorum*), northern district. A. MAURORUM: Shores of Dead Sea.

ALISANDER, or ALEXANDERS. See SMYRNICUM.

ALISMA PLANTAGO (N.O. *Alismaceæ*): Water plantain. Long-pointed leaves on long stalks; flowers in a panicle. Pools and ditches. Lake Huleh, etc.

ALKANET (N.O. *Boraginaceæ*). See ANCHUSA.

ALKANNA (N.O. *Boraginaceæ*): Genus resembling *Anchusa.* Purple or yellow flowers.

A. TINCTORIA: Yields a red dye. Five other species.

ALLIUM (N.O. *Liliaceæ*): Bulbous plants with strong odour, grass-like leaves, and flowers in an umbel. The onion, leek, and shallot are of this genus, and many ornamental varieties.

A. CARMELI (P.): Mount Carmel, among rocks.

A. NEAPOLITANUM: Littoral districts about Jerusalem and Gilead.

A. ROSEUM: Plains of Moab. Thirty-seven other species and varieties.

ALMOND. See AMYGDALUS.

ALNUS ORIENTALIS (N.O. *Betulaceæ*): Oriental alder. Phœnician Plain on the Litany.

A. GLUTINOSA: Common alder.

ALOE (N.O. *Liliaceæ*): Plants with permanent fleshy leaves and flowers in erect spikes.

A. VERA, A. VULGARIS: From which comes the drug called aloes. Flowers pendulous, yellow. Jordan Valley.

ALOPECURUS (N.O. *Gramineæ*): Fox-tail grass.

A. AGRESTIS: Slender fox-tail. General. Three other species.

ALSINE (N.O. *Alsineæ*): Small herbs, generally with narrow leaves and small white flowers, resembling sandwort.

A. PROCUMBENS: Sandy desert south of Gaza. Thirteen other species or varieties.

ALTHÆA (N.O. *Malvaceæ*): Marsh-mallow. Resembles *Malva*, but distinguished by the flowers having an outer calyx of six to nine pieces and an inner one partly divided above into five pieces.

A. HIRSUTA: Carmel, Galilee, Nebo.

A. LAVATERÆFLORA: Hollyhock. Hill country.

A. OFFICINALIS: Common marsh-mallow. Perennial root stock; erect flower-stems; egg-shaped leaves and pale pink flowers.

A. ROSEA: The origin of the hollyhock of gardens. Hills above Lake Huleh. Six other species. See Illustration XXXI.

ALYSSUM (N.O. *Cruciferæ*) : Herbaceous annual plants with small yellow flowers in clusters.

A. ALPESTRE : Lebanon and Anti-Lebanon ; 6,000 to 9,000 feet.

A. CAMPESTRE : Everywhere in cultivated ground. Twelve other species.

AMARANTHUS (N.O. *Amaranthaceæ*) : A genus of tropical annual plants, with handsome foliage and a three-bracted coloured calyx.

A. HYPOCHONDRIACUS : Prince's-feather. Cultivated ground, Beyrout. Four other species. See Illustration XXXII.

AMBERBOA (N.O. *Compositæ*) : Plants resembling *Centaurea*.

A. LIPPII : Desert south-west of Dead Sea.

A. MOSCHATA : Sweet-sultan. Probably introduced. One other species.

AMBROSIA (N.O. *Compositæ*) : A genus resembling wormwood, with opposite or alternate leaves and flowers in racemes or bunches in the axils of the flowers.

A. MARITIMA : The whole plant has a sweet scent and an aromatic taste. Maritime plains.

AMMI : A small genus of carrot-like plants.

A. MAJUS : Common bishop's-weed. Two other species.

AMYGDALUS (N.O. *Rosaceæ*) : Genus containing the almond, peach, etc. ; distinguished by the stone of the fruit being furrowed or wrinkled.

A. AGRESTIS (P.) : The Bukâá.

A. COMMUNIS : Almond-tree.

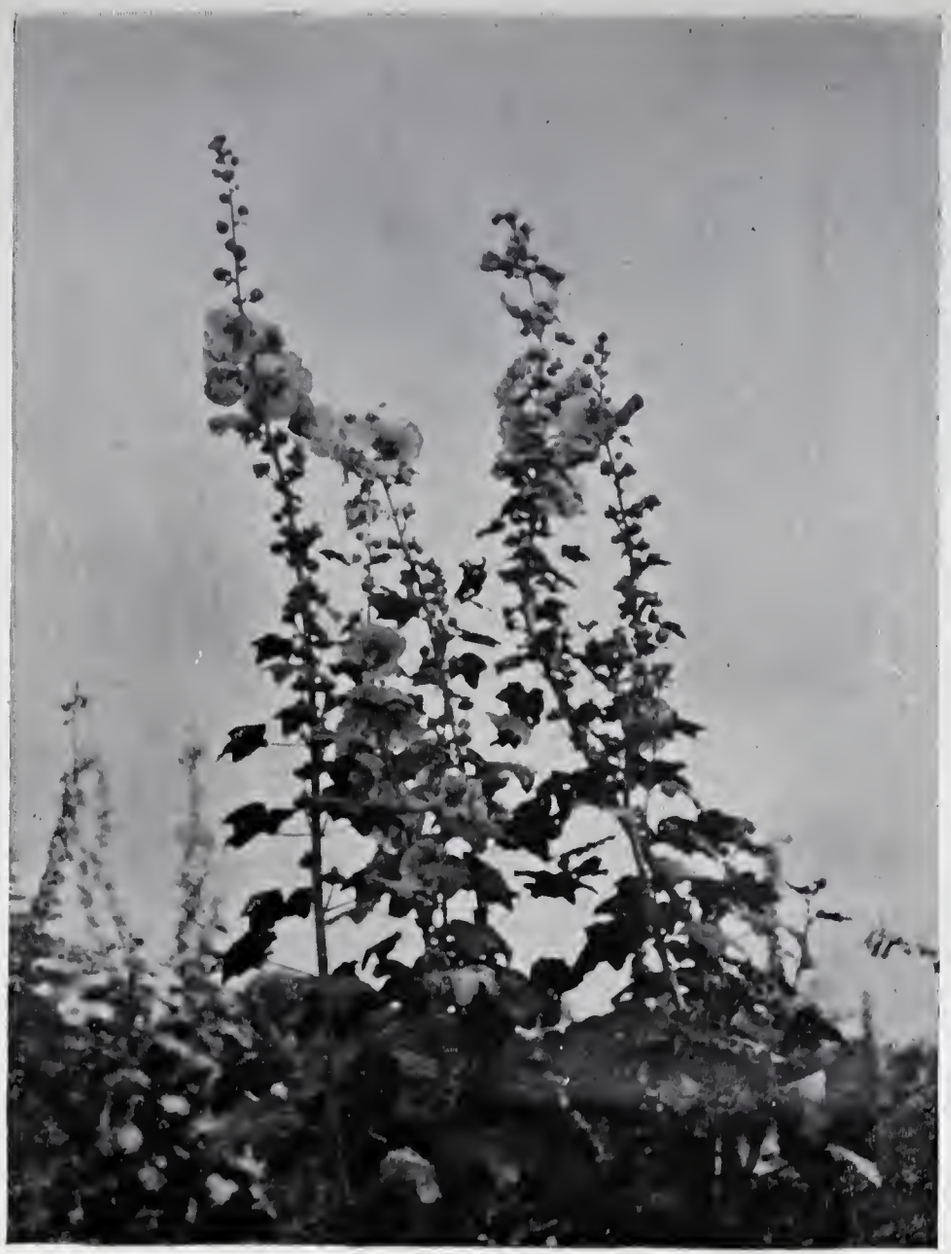
A. ORIENTALIS : Anti-Lebanon.

A. PERSICA VULGARIS : Peach.

A. SPARTIOÏDES : Rocky slopes of Anti-Lebanon.

ANABASIS (N.O. *Chenopodiaceæ*) : Genus of trees and shrubs. Leaves often small and opposite, flowers sessile and single.

A. ARTICULATA : Deserts, South Judæa. Two other species.



XXXI.—ALTHÆA ROSEA: WILD-HOLLYHOCK.

XXXII.—AMARANTHUS HYPOCHONDRIACUS: PRINCE'S FEATHER.

To face page 50.

ANACAMPTIS PYRAMIDALIS (N.O. *Orchideæ*): Pyramidal orchis. Differs from other species by two small appendages at the base of the third petal. Coast and hill districts.

ANACYCLUS (N.O. *Compositæ*): Herbs resembling chamomile.

A. RADIATUS: Waste lands on coast. Two other species.

ANAGALLIS ARVENSIS (N.O. *Primulaceæ*): Pimpernel (var. *Phœnicia* and *Cœrulea*). Small creeping plants with respectively red and blue flowers. The scarlet pimpernel is called shepherd's-barometer and poor man's weather-glass, as the flower never opens on a rainy day, and closes before a shower. Universal.

A. LATIFOLIA: In corn-land, Southern Palestine.

ANAGYRIS FŒTIDA (N.O. *Leguminosæ*): A large bush with trifoliate leaves and racemes of yellow flowers resembling the laburnum. Ravines near coast.

ANARRHINUM ORIENTALE (N.O. *Scrophulariaceæ*): Herbaceous plants with small flowers in spike-shaped racemes. Lower dry districts and on stony hills.

ANASTATICA HIEROCHUNTINA (N.O. *Cruciferæ*): Rose-of-Jericho (see p. 9). Only on the shores of the Dead Sea.

ANCHONIUM (N.O. *Cruciferæ*): Perennial Alpine stellate-woolly herbs.

A. BILLARDIERI: Has racemes of bracted purple flowers. Lebanon and Anti-Lebanon.

ANCHUSA (N.O. *Boraginaceæ*): Alkanet. A genus of rough plants with funnel- to salver-shaped corolla. Flowers purple, blue, or yellow; leaves often large and hairy.

A. OFFICINALIS: Common alkanet. Narrow oblong leaves and purple flowers. Jerusalem, etc. Eleven other species.

ANDRACHNE TELEPHIOÏDES (N.O. *Euphorbiaceæ*): Belongs to a genus of spurgeworts; a perennial herb of no great beauty. Waste ground everywhere. One other species.

ANDROPAGON (N.O. *Gramineæ*): A large genus of grasses.

A. SCHŒNANTHUM: Sweet-scented lemon-grass. Gennesaret. Two other species.

ANDROSACE (N.O. *Primulaceæ*): Mountain plants with tufted leaves, growing close to the ground, and primrose-like flowers, white or pink. From 2 to 6 inches high.

A. VILLOSA: Top of Lebanon, snow-line. Two other species.

ANDRYALA DENTATA (N.O. *Compositæ*): An evergreen herbaceous plant with yellow flowers. Coast.

ANEMONE CORONARIA (N.O. *Ranunculaceæ*): Plants with tuberous roots, and ternate leaves divided into fine segments resembling parsley. Petals absent; broad sepals of various colours—red, white, purple, etc. Universal.

A. BLANDA: Tuberous root; finely divided leaves; nine to fifteen blue oblong sepals. From Taurus to Lebanon.

ANETHUM GRAVEOLENS (N.O. *Umbelliferæ*): Common dill. A fennel-like plant. Supposed to be the anise of the New Testament. Plain of Sharon.

ANISEED. See PIMPINELLA.

ANKEROPETALUM CŒLESYRIACUM (P.) (N.O. *Sileneæ*): Resembles *Gypsophila*. Plain of the Bukâá.

ANTHEMIS (N.O. *Compositæ*): A genus of plants, with strongly fragrant and bitter flowers containing camphor and tannin.

A. NOBILIS: Chamomile.

A. PALÆSTINA: General.

A. TINCTORIA: Yellow chamomile. Dry, hilly, and mountain districts. Eighteen other species.

ANTHISTERIA GLAUCA (N.O. *Gramineæ*): A tall grass, generally tropical. Near the coast. Two other species.

ANTHRISCUS (N.O. *Umbelliferæ*): A genus with finely divided leaves, and small inconspicuous white flowers in umbels.

A. NEMOROSA: Wooded districts, Lebanon. Three other species.

ANTICHARIS GLANDULOSA (N.O. *Scrophulariaceæ*): Southern Desert.

ANTIRRHINUM (N.O. *Scrophulariaceæ*): Snapdragon. Annual or perennial, rarely shrubby, herbaceous plants. The flower resembles the face of an animal or mask; hence the name, which means 'snout-like.'

A. MAJUS: Great snapdragon. Northern Palestine.

A. ORONTIUM: Lesser snapdragon. General.

ANVILLÆA GARCINI (N.O. *Compositæ*): A rigid branching desert herb. Wady Zuweirah.

APIUM GRAVEOLENS (N.O. *Umbelliferæ*): Celery. Marshy places, maritime.

APPLE OF SODOM. See SOLANUM SANCTUM, and p. 20.

ARABIS (N.O. *Cruciferæ*): Wall-cress. Small annual or perennial herbaceous plants with white and purple flowers.

A. VERNA: Mountain districts. Seven other species, all in hill or mountain regions.

ARBUTUS UNEDO (N.O. *Ericaceæ*): Strawberry-tree. Woods of Gilead.

A. ANDRACHNE: In woods and among shrubs in hill country.

ARCENTHOBIUM OXYCEDRI (N.O. *Loranthaceæ*): A parasitic plant with fleshy leaves and succulent berries. On junipers. Alpine Lebanon.

ARENARIA (N.O. *Alsineæ*): Sandwort. Small herbs resembling chickweed, with egg-shaped leaves sometimes fringed with hair.

A. GRAVEOLENS: Northern mountain region. Three other species.

ARGYROLOBIUM (N.O. *Leguminosæ*): Herbs or dwarf shrubs, the leaves and pods generally covered with silvery hair; yellow flowers.

A. UNIFLORUM: In deserts and barren grounds. One other species.

ARISTIDA CŒRULESCENS (N.O. *Gramineæ*): Triple-awned grass. Four other species.

ARISTOLOCHIA (N.O. *Aristolochiaceæ*): A curious genus of plants, mostly shrubs, the leaves heart-shaped. The calyx is of a somewhat tubular form; the flowers, dingy in colour, act as a kind of fly-trap.

A. ALTISSIMA, A. SEMPERVIRENS: Lower Lebanon and Anti-Lebanon. Five other species or varieties.

ARMENIACA VULGARIS (N.O. *Rosaceæ*): Apricot. Not truly indigenous, but cultivated and naturalized from very early times.

ARMERIA (N.O. *Plumbaginaceæ*): Thrift. Plants with narrow grass-like leaves and compact flower-heads, resembling scabious.

A. MAJELLENSIS (var. *Leucantha statice undulata*): Alpine and Subalpine Lebanon and Anti-Lebanon.

ARNEBIA (N.O. *Boraginaceæ*): Allied to *Lithospermum*. Small bristly plants with yellow or purple flowers.

A. HISPIDISSIMA: Southern desert. Three other species.

ARRHINATHERUM PALÆSTINUM (N.O. *Gramineæ*): A species of oat-grass. Barren plains.

ARROW-HEAD. See SAGITTARIA.

ARTEDIA (N.O. *Umbelliferæ*): Annual herbs with white flowers and pinnate leaves.

A. SQUAMATA: Hills and fields in sunny places. General.

ARTEMISIA (N.O. *Compositæ*): Genus of wormwood. Shrubby or herbaceous plants; leaves much divided, often grey; flower-heads small, in panicles, yellow or greenish; mostly strongly scented and with a bitter taste.

A. MONOSPERMA: Along the coast on barren sands and southern desert. Six other species.

ARTHROCNEMUM GLAUCUM (N.O. *Chenopodiaceæ*): Resembling salicornia. By the Dead Sea.

ARTICHOKE. See CYNARA.

ARUM (N.O. *Araceæ*): A genus of plants having a spathe with the edges rolled over each other at the base; flowers on a club-shaped spike, turning to a berry-like fruit.

A. PALÆSTINUM: Spathe and spadix dark purple. Central Palestine. Thirteen other species and varieties.

ARUNDO DONAX (N.O. *Gramineæ*): A reed the canes of which attain a great height, and were used to make arrows by the Jews and by the heroes of Homer; they have also been used in making musical instruments. The leaves are a glaucous green. One other species and variety.

ASH-TREE. See FRAXINUS.

ASPARAGUS (N.O. *Asparagaceæ*): A genus of lilies with succulent fruit.

A. PALÆSTINUS (P.): Along the Jordan. Six other species.

ASPERUGO PROCUMBENS (N.O. *Boraginaceæ*): Madwort. Annual plant with trailing stem, very small purple flowers, and bristly leaves.

ASPERULA (N.O. *Rubiaceæ*): Herbs with square stems, whorled leaves, and four-cleft flowers—white, pink, yellow, or blue.

A. ARVENSIS : Blue flowers. General.

A. ORIENTALIS : Northern plains. Eleven other species and varieties.

ASPHODELINE : Resembles asphodelus.

A. LUTEA : Esdraleon. Central hills, etc. Three other species.

ASPHODELUS (N.O. *Liliaceæ*) : The asphodel. Genus of perennial plants, with linear lanceolate leaves, simple or branched scape, and flowers in close racemes.

A. FISTULOSUS : Common on plains and hills.

A. RAMOSUS : Abundant. Central plains, etc. Three other species.

ASPIDIUM ACULEATUM (N.O. *Filices*) : Prickly shield-fern.

ASPLENIUM ADIANTUM NIGRUM : Black spleenwort.

A. CETERACH : Scaly ceterach or scale-fern.

A. FILIX-FŒMINA : Lady-fern.

A. FONTANUM (var. *Bourgæi*) : Rock spleenwort.

A. LANCEOLATUM : Lanceolate spleenwort.

A. TRICHOMENES : Common spleenwort.

ASTERISCUS (N.O. *Compositæ*) : Annual or perennial herbs with many-flowered heads.

A. AQUATICUS : Ditches, maritime plains. Two other varieties.

ASTEROLINUM STELLATUM (N.O. *Primulaceæ*) : Small annual with minute greenish-white flowers.

ASTOMA SESELIFOLIUM (N.O. *Umbelliferæ*) : A herb with aspect of *Scalegeria Cretica*. Bare hills, Southern Palestine and Lebanon.

ASTRAGALUS (N.O. *Leguminosæ*) : Perennial plants resembling the vetch, with woody roots, unequally pinnate leaves, and various coloured flowers—yellow, purple, and white. Different species are found all over Palestine, in the hot regions near the Dead Sea, and on Hermon and Lebanon up to 9,000 feet.

A. COLUTEOIDES (P.): Lebanon and Anti-Lebanon, 6,000 to 9,000 feet.

A. DRUSORUM: A species armed with warlike spines. Galilee and Lebanon.

A. GUMMIFER: Contains gum-like substance called tragacanth, and has yellow flowers and sharp spines. Lebanon and Hermon.

A. GYZENSIS: South of the Dead Sea.

A. MOLLIS: In the north.

A. SANCTUS (P.): Hill districts of the south, etc. About seventy other species and varieties.

ATRACTYLIS (N.O. *Compositæ*): Thistle-like plants with prickly leaves, and florets generally pink.

A. FLAVA: South of Dead Sea. Three other species.

ATRAPHAXIS BILLARDIERI (N.O. *Polygoneæ*): Low shrubs with stiff, often spiny, stems, oblong leathery leaves, and coloured calyx. Fruit, a small nut. Lower Lebanon and Anti-Lebanon. Two varieties.

ATRIPLEX (N.O. *Chenopodiaceæ*): Orache. A genus of plants having a kind of mealiness on the leaves, and two bracts enclosing the fruit. Some of the species are eaten as spinach.

A. FARINOSUM: South of Dead Sea.

A. HALIMUS: Especially plentiful round the Dead Sea.

A. HASTATUM (var. *Salinum*): Common orache. In waste and dry places.

A. PORTULACOIDES: Sea purslane. On the coast and in the Ghor. Eight other species and varieties.

AUBRIETIA (N.O. *Cruciferæ*): Low-growing plants with grey-green leaves and purple flowers.

A. DELTOIDEA: Galilee, Anti-Lebanon. Two other species.

AVENA (N.O. *Gramineæ*): Oat-grass genus.

A. FATUA: Wild-oat or havers.

A. STRIGOSA: Bristle oat. Moab. Five other species.

B.

BALANITES ÆGYPTIACA (N.O. *Simarubaceæ*): Modern balm of Gilead. A thorny shrub or small tree. Leaves in pairs. Flowers small, greenish-white, scented, in short racemes. Fruit oval. The Ghor; round Dead Sea.

BALLOTA (N.O. *Labiatæ*): A genus of herbaceous plants, distinguished by a ten-ribbed salver-shaped calyx and a powerful odour.

B. DAMASCENA: Sunny hills under Hermon.

B. NIGRA: Black horehound. Egg-shaped wrinkled leaves and dull purple flowers. Waste land everywhere. Five other species and varieties.

BALM (COMMON). See MELISSA.

BALM OF GILEAD. See BALSAMODENDRON.

BALSAMODENDRON OPOBALSAMUM (N.O. *Burseraceæ*): Balm of Gilead. Belonging to a genus with spiny branches; foliage scanty and pinnated; flowers small, green, and axillary; fruit small and oval. In ancient times cultivated about Jericho; now lost.

BARBAREA (N.O. *Cruciferæ*): Winter cress. A herb resembling watercress.

B. MINOR: Lebanon and Hermon, 8,000 feet. One other species.

BARBERRY. See BERBERIS.

BARLEY and BARLEY-GRASS. See HORDEUM.

BARTSIA. See EUPHRAYIA.

BASIL. See CALAMINTHA.

BAY-TREE. See LAURUS.

BEAKED PARSLEY. See ANTHRISCUS.

BEAN-CAPERS. See ZYGOPHYLLUM.

BEAN-GRASS. See POLYPOGON.

BEET. See BETA.

BELLEVALIA (N.O. *Liliaceæ*) : Bulbous plants resembling the larger *Muscari*, but distinct by the perianth being divided half-way down into six folded lobes, expanding to form a bell.

B. CILIATA : Southern desert near the Dead Sea.

B. MACROBOTYS : Gennesaret, etc. Seven other species.

BELL-FLOWER (NETTLE-LEAVED). See CAMPANULA.

BELLIS PERENNIS (N.O. *Compositæ*) : Daisy. Lower slopes of Lebanon.

'Wee modest crimson-tipped flower.'

B. ANNUA : Phœnician Plain.

B. SYLVESTRIS : Maritime region.

BENT-GRASS. See AGROSTIS.

BERBERIS VULGARIS (N.O. *Berberidaceæ*) : Barberry. A shrub with spiny shoots and small obovate leaves. The yellow flowers consist of a calyx of coloured sepals. The berries are generally bright red.

B. CRATÆGINA, B. CRETICA : Hermon and Lebanon.

BERULA ANGUSTIFOLIA (N.O. *Umbelliferæ*) : Water parsnip. Huleh, and elsewhere in water.

BETA MARITIMA (N.O. *Chenopodiaceæ*) : Common beet. Littoral districts round Dead Sea.

BETONICA OFFICINALIS (N.O. *Labiatæ*) : Wood betony. Resembling stachys.

BIARUM (N.O. *Araceæ*) : A genus of arum-like plants.

B. ALEXANDRINUM : Spathe dark greenish-purple ; appendix of spadix blackish-purple. Gennesaret.

B. PYRAMI : Spadix club-shaped, black-purple. By the Lake of Galilee. Two other species.

BIERBERSTEINIA MULTIFIDA (N.O. *Rutaceæ*): A perennial glandular herb, with pinnate leaves, flowers in terminal racemes, with five sepals and five petals, and membranous fruit, one seeded. Lebanon and Hermon.

BIFORA TESTICULATA (N.O. *Umbelliferæ*) (var. *Microcarpa*): Near Jerusalem, Moab.

BINDWEED. See CONVOLVULUS.

B., CLIMBING. See POLYGONUM.

BIRD'S-FOOT TREFOIL. See LOTUS.

BISCUTELLA (N.O. *Cruciferæ*): Herbs with erect stems, oblong, simple, or pinnatifid leaves, and small yellow flowers.

B. COLUMNÆ: Hill districts and Moab highlands. Three other species.

BISERELLA PELECINUS (N.O. *Leguminosæ*): A plant with short few-flowered racemes of small bluish flowers. In fields.

BISHOP'S-WEED. See AMMI.

BISTORT. See POLYGONUM.

BITTER CUCUMBER. See CITRULLUS.

BITTER CRESS. See CARDAMINE.

BITTER-SWEET. See SOLANUM.

BLACK BRYONY. See TAMUS.

BLACK ELDER. See SAMBUCUS.

BLADDER FERN. See CYSTOPTERIS.

BLADDER KETMIA. See HIBISCUS.

BLADDER SENNA. See COLUTEA.

BLADDERWORT. See UTRICULARIA.

BLECHNUM. See LOMARIA.

BLESSED THISTLE. See CNICUS.

BLITUM (N.O. *Chenopodiaceæ*): Strawberry blite. A genus distinguished by the fruit-like character assumed by the calyx, somewhat resembling a small strawberry. The flowers are in clusters and inconspicuous.

B. VIRGATUM: Has leaves with a spinach-like flavour. Subalpine Lebanon.

BLYSMUS COMPRESSUS (N.O. *Cyperaceæ*): Belongs to a genus of plants with inflorescence in compressed spikes. Moab highlands; Lebanon, in wet places.

BOERHAAVIA PLUMBAGINEA (N.O. *Nyctaginaceæ*): A herb belonging to tropical and hot regions. Perianth divided, the lower portion cylindrical, the upper funnel- or bell-shaped, and coloured. Maritime plains, Esdraelon, Jordan Valley.

BONGARDIA CHRYSOGONUM (N.O. *Berberidaceæ*): A small stemless plant with a potato-like root, four or five long-stalked pinnate leaves, and small yellow flowers. Distinguished as two species—*B. rauwolfii* and *B. olivieri*. Through the hilly districts.

BORAGE. See BORAGO.

BORAGE-WORT. See CERINTHE.

BORAGO OFFICINALIS (N.O. *Boraginaceæ*): Borage. A herb with round stem, rough alternate leaves, and deep blue flowers. Cultivated and waste land.

BOX-THORN. See LYCIUM.

BOX-TREE (ORIENTAL). See BUXUS.

BRACKEN-FERN. See PTERIS.

BRASSICA RAPA (N.O. *Cruciferæ*): Rapeseed. Cultivated.

B. NAPUS: Turnip. Cultivated. Two other species.

BRIZA (N.O. *Gramineæ*): Quaking-grass. A genus of grasses with inflorescence in panicles.

B. MAXIMA: Moab. Two other species.

BROAD-LEAVED HELLEBORINE. See EPIPACTIS.

BROCCHIA CINERIA (N.O. *Compositæ*): An annual herb resembling pyrethrum, with many-flowered heads. Southern desert towards Petra.

BROME-GRASS. See BROMUS.

BROMUS (N.O. *Gramineæ*): Brome-grass. Grasses with inflorescence in lax panicles.

B. SCOPARIUS: Tabor, Gennesaret, etc. Twelve other species.

BROOKWEED. See SAMOLUS.

BROOM (PRICKLY). See CALYCOTOME.

B., SPANISH. See SPARTIUM.

B., WHITE. See Retama.

BROOMRAPE. See PHELIPÆA.

BRYONIA (N.O. *Cucurbitaceæ*): Climbing plants with tendrils, the stamens and pistils on the same plant, but in different flowers; the leaves angular, three- to seven-lobed. Bell-shaped flowers in clusters.

B. DIOICA: Bryony. Flowers greenish-yellow, berries red.

B. MULTIFLORA: General.

B. SYRIACA: Everywhere in thickets and brushwood.

BUCKTHORN. See RHAMNUS.

B. PLANTAIN. See PLANTAGO.

BUFFONIA (N.O. *Alsineæ*): Annual or perennial herbs, with four sepals and four white petals, stiff slender stems, and awl-shaped leaves.

B. MACROSPERMA: Stony places, Lebanon, etc. Four other species and varieties.

BUGLE. See AJUGA.

BULRUSH. See TYPHA.

BUPLEURUM (N.O. *Umbelliferæ*) : Hare's-ear. Plants with roundish oval alternate leaves, so extended at the base that 'everie branche doth grow thorowe everie leafe, making them like hollowe cups or sawcers' (Gerarde). Small greenish-yellow flowers with large bracts.

B. PROTRACTUM : General east and west. Thirteen other species and varieties.

BURDOCK. See LAPPA.

BUR PARSLEY. See CAUCALIS.

BURWEED. See SPARGANIUM and XANTHIUM.

BUTCHER'S-BROOM. See RUSCUS.

BUTOMUS UMBELLATUS (N.O. *Butomaceæ*) : Flowering rush. In sluggish streams. Lake Huleh, Esdraelon, etc.

BUXUS LONGIFOLIA (N.O. *Buxaceæ*) : Oriental box-tree. On Lebanon (subalpine).

C.

CACCINIA RUSSELII (N.O. *Boraginaceæ*) : A bristly herb with salver-shaped corolla. Syrian Desert, etc.

CACHRYS GONIOCARPA (N.O. *Umbelliferæ*) : A perennial herb with yellow flowers, hot seeds, and leaves dissected into linear lobes. Plain of Philistia.

CACTUS. See OPUNTIA.

CAKILE MARITIMA (N.O. *Cruciferæ*) : Sea-rocket. A seaside herbaceous plant with oblong deeply lobed fleshy leaves, smooth and of a glaucous colour, and lilac flowers. On the coast.

CALAMINTHA (N.O. *Labiateæ*): Herbaceous aromatic herbs with flowers in stalked tufts, which proceed from the axils of the leaves. 'Calyx two-lipped, stamens diverging, upper lip of corolla nearly flat.' 'The seed cureth the infirmities of the hart . . . and maketh a man merrie and glad' (Gerarde).

C. CLINOPODIUM: Wild-basil. Flowers reddish-purple. Lebanon, Galilee. Four other species.

CALENDULA (N.O. *Compositæ*): Annual or perennial plants with numerous yellow or orange-coloured flowers, grouped on a nearly flat surface, with a powerful odour.

C. PALÆSTINA: Carmel, Gerizim, about Jerusalem, etc. Four other species or varieties.

CALEPINA CORVINI (N.O. *Cruciferæ*): An annual white-flowered herb. Common in all the central districts.

CALLIGONUM (N.O. *Polygonaceæ* — buckwheats): Leafless shrubs with jointed branches. Flowers small, springing from the axils of the sheaths; the perianth is red, the fruit a large four-cornered nut.

C. COMOSUM: Southern desert.

C. POLYGONOIDES: Northern and eastern deserts.

CALLIPELTIS CUCULARIA (N.O. *Rubiaceæ*): An annual erect, much-branched herb. The flowers are bell-shaped and whitish in whorls of six. Universal on hills east and west of Jordan.

CALLITRICHE VERNALIS (N.O. *Halorageæ*): Water starwort. A small aquatic plant with simple opposite leaves and minute flowers. In standing water, general.

CALOTROPIS PROCERA (N.O. *Asclepiadaceæ*): A shrub with bell-shaped white flowers. Fruits in pairs resembling the horns of an animal. Engedi, Zuweirah, Safieh, etc.; all round Dead Sea.

CALYCOTOME SPINOSA (N.O. *Leguminosæ*): Prickly broom. A stiff spiny bush with trifoliate leaves and numerous yellow flowers, single in the axils of the leaves. Coast, southern wilderness, Jordan Valley, Gilead.

CAMELINA (N.O. *Cruciferæ*): False flax. Dwarf annual herbs with yellow flowers.

C. SATIVA: Gold of pleasure. Beyrout. Three other species.

CAMPANULA (N.O. *Campanulaceæ*): Bell-flower. An extensive and varying genus of beautiful herbaceous plants.

C. DAMASCENA (P.): Mount Hermon.

C. HIEROSOLYMITANA (P.): Jerusalem, Nablous, etc.

C. RAPUNCULUS: Rampion.

C. SIDONIENSIS (P.): Phœnician coast.

C. SULPHUREA (P.): On all the maritime plains.

C. TRACHELIUM: Nettle-leaved bell-flower.

C. TRICHOPODA (P.): Fissures of rocks, Lebanon. Fifteen other species and varieties.

CAMPHOROSMA MONSPELIACUM (N.O. *Chenopodiaceæ*): A small shrub with axillary sessile flowers, and seeds containing a pungent volatile matter. Salt marshes on the coast.

CAMPION. See SILENE.

CANDYTUFT. See IBERIS.

CANNABIS SATIVA (N.O. *Urticaceæ*): Hemp. A tropical annual, growing from 4 to 10 feet high. In India the dried plant is pounded with water into a pulp to form an intoxicating drink called *bhang*. Cultivated, but becomes wild in places.

CAPER. See CAPPARIS.

CAPPARIS (N.O. *Capparidaceæ*): Shrubs with simple leaves, often with two little spines at their base; showy flowers with a four-parted calyx, four petals, and numerous stamens succeeded by a berry.

C. SPINOSA: The caper. This plant grows on walls and perpendicular faces of rocks, and has white flowers with purple filaments. Jerusalem, Jordan Valley, etc. Var. *Ægyptiaca:* Common by the Dead Sea. Two other species. See p. 22.

CAPSELLA (N.O. *Cruciferæ*) : A well-known plant with heart-shaped pods.

C. BURSAPASTORIS : Shepherd's-purse. General. One other species.

CARAWAY. See CARUM.

CARDAMINE HIRSUTA (N.O. *Cruciferæ*) : Bitter cress. Lebanon.

CARDOON. See CYNARA.

CARDOPATIUM CORYMBOSUM (N.O. *Compositæ*) : A thistle-like plant with small blue flower-heads. According to Gibourt, this plant is the true black chameleon of the ancients.

CARDUNCELLUS ERIOCEPHALUS (N.O. *Compositæ*) : A genus of the thistle group, closely related to *Carthamus*. Southern Desert, Gaza.

CARDUUS (N.O. *Compositæ*) : Plumeless thistle. Thistle-like plants with smooth fruit covered by a stalkless tuft of hair.

C. NUTANS : Flowers large, purple. Hills, coast. Four other species and varieties.

CAREX DIVISA (N.O. *Cyperaceæ*) : Bracteate marsh sedge. General in marshes.

C. PENDULA : Great pendulous sedge. Subalpine and Alpine Lebanon.

C. VULPINA : Great sedge. General in marshes and by rivers. Eleven other species of carex.

CARLINA (N.O. *Compositæ*) : Carline thistle. Thistle-like plants with inner leaves of the calyx coloured, and of the texture called 'everlasting.'

C. CORYMBOSA : Country round Lebanon and Anti-Lebanon. One other species and two varieties.

CARPOCERAS OXYCERAS (N.O. *Cruciferæ*) : A cress resembling *Thlaspi*. Galilean hills.

CARRICHTERA VELLÆ (N.O. *Cruciferæ*) : A dwarf annual with small cream-coloured, violet-veined flowers. Lower Jordan Valley, etc.

CARROT. See DAUCUS.

CARTHAMUS (N.O. *Compositæ*): A small genus of thistles with orange or yellow flowers surrounded by bracts with spiny edges and embedded in a dense mass of scales or hairs.

C. DENTATUS: Mountains of Moab. Eight other species and varieties.

CARUM (N.O. *Umbelliferæ*): The genus which produces the caraway. Biennial or perennial herbs with tuberous root and white or cream-coloured flowers.

C. ELEGANS: A species with pretty flowers. Northern plains and mountains. Nine other species.

CASSIA OBOVATA (N.O. *Leguminosæ*): Of the genus of trees, shrubs, or herbs which produce the drug called senna. The leaflets are unequal at the base, and the showy yellow flowers have five unequal sepals and five petals. Wâdys east and south opening on the Dead Sea.

CASTANEA VULGARIS (N.O. *Cupuliferæ*): Spanish chestnut. Lebanon and Anti-Lebanon. Probably introduced.

CATABROSA AQUATICA (N.O. *Gramineæ*): Whorl-grass. Magdala.

CATANANCHE LUTEA (N.O. *Compositæ*): A chicory-like annual plant, with involucre and yellow flowers. General.

CATCHFLY. See SILENE.

CAT-MINT. See NEPETA.

CAT'S-EAR. See HYPOCHŒRIS.

CAT'S-TAIL GRASS. See PHLEUM.

CAUCALIS (N.O. *Umbelliferæ*): Annual herbs. The oblong fruit is ribbed with four rows of prickles.

C. DAUCOIDES: Bur parsley. Five other varieties and species.

CEDAR. See CEDRUS.

CEDRUS LIBANI (N.O. *Coniferæ*): Cedar of Lebanon. Lebanon.

CELERY. See APIUM GRAVEOLENS.

CELSIA (N.O. *Scrophulariaceæ*): Annual or biennial plants closely allied to *Verbascum*, with wheel-shaped, five-lobed corolla. The biennials have spikes of yellow mullein-like flowers.

C. ALPINA (P.): Glens of Anti-Lebanon. Three other species.

CELTIS AUSTRALIS (N.O. *Urticaceæ*): Nettle-tree. A handsome tree, 30 to 40 feet high, resembling the elm, but distinguished by bearing, instead of a membranous fruit, a hard fleshy edible drupe, like a small, black, sweet cherry, supposed to have been the lotus of the ancients, which Homer says was so delicious as to make those who ate it forget their native country. Gilead, Upper Jordan Valley, etc.

CENTAUREA (N.O. *Compositæ*): Knapweed or star-thistle. An extensive and varied genus of annual and perennial herbaceous or half-shrubby plants. They have an involucre of many scales or leaflets, and flowers white, blue, yellow, or purple. See p. 21.

C. BABYLONIA: General.

C. CYANOIDES (P.): Universal.

C. CYANUS: Corn blue-bottle. Beyrout. Probably introduced.

C. DAMASCENA (P.): Pale pink flowers. Base of Hermon. Forty-two other species and varieties.

CENTAURY. See ERYTHRÆA.

CENTRANTHUS (N.O. *Valerianaceæ*): Annual or perennial plants, with simple opposite leaves and red or white flowers in panicles.

C. RUBER: Red valerian. On rocks, Lebanon. Two other species.

CEPHALANTHERA (N.O. *Orchideæ*): A genus of orchids, with broad ribbed leaves clothing the whole stem, and nearly regular white or red half-closed flowers.

C. ENSIFOLIA: Narrow-leaved helleborine. Subalpine Lebanon, Gilead.

C. PÆLLENS, C. GRANDIFLORA: Large white helleborine. Wâdys of Gilead.

CEPHALARIA (N.O. *Dipsacaceæ*): A genus, belonging to the teazleworts, of annual or perennial herbs. The heads of flowers are surrounded by leaves, and each flower has an involucre. The flowers are white, yellow, or lilac.

C. SYRIACA: This species has a bristly stem and stiff ovate heads. General. Five other species and one variety.

CEPHALORRHYNCHUS CANDOLLEANUS (N.O. *Compositæ*): A biennial herb with tuberous roots; heads cylindrical, with few flowers. Lebanon and Anti-Lebanon.

CERASTIUM (N.O. *Alsineæ*): A genus of small white-flowered plants, generally called mouse-eared chickweeds.

C. INFLATUM: Moab. Six other species.

CERASUS (N.O. *Rosaceæ*): Cherry-tree.

C. MICROCARPA, C. ORIENTALIS: Anti-Lebanon.

C. PROSTRATA: Galilean hills, Lebanon, and Anti-Lebanon.

CERATOCAPNOS PALÆSTINA (P.) (N.O. *Fumariaceæ*): A scrambling shrub, with four petals spurred at the base and six stamens. Walls and rocks, coast and hill districts.

CERATOCEPHALUS FALCATUS (N.O. *Ranunculaceæ*): A small annual covered with cottony hairs, with many cleft radical leaves, short one-flowered scapes, and small yellow flowers. Hill districts and Aroer.

CERATONIA SILIQUA (N.O. *Leguminosæ*): Locust-tree or carob-tree. A small branching tree with pinnate leaves of leathery texture; the flowers are without a corolla and in small red racemes, and the long thin pods are of dark brown colour. General, except on higher and colder hills.

CERCIS SILIQUASTRUM (N.O. *Leguminosæ*): Judas-tree, also called red-bud. A handsome low tree with a spreading head, simple kidney-shaped leaves, deep pink flowers, and flat thin brown pods. Carmel, Tabor, Gerizim, and all lower wooded hills.

CERINTHE (N.O. *Boraginaceæ*): A small genus of borageworts. Annual plants (with one exception), with oval glaucous stem, clasping leaves, and tubular flowers in drooping leafy racemes.

C. MAJOR: Honeywort. The stem is branched and set with rough white dots; flowers in racemes; corolla purple and about 1 inch long. Central Palestine, etc.

C. MINOR: Honeywort. Flowers smaller and yellow in colour. Northern district.

CHÆROPHYLLUM (N.O. *Umbelliferæ*): Biennial or perennial herbs with white or yellowish flowers.

C. SYRIACUM (P.): Lebanon. Two other species.

CHÆTOSCIADIUM TRICOSPERMUM (N.O. *Umbelliferæ*): An annual herb with aspect of pimpinella, and white flowers. Rocky shady places, Jerusalem, Carmel, etc.

CHAMÆMELUM (N.O. *Compositæ*): Perennial herbs with finely dissected leaves and many-flowered heads.

C. PRÆCOX: Cultivated fields. Three other species.

CHAMÆPEUCE (N.O. *Compositæ*): Thistle-like plants from 1 to 6 feet high, with purple or white flowers.

C. ALPINA (Do., var. *Camptolepis*). General in Northern and Central Palestine. Two other varieties.

CHAMOMILE. See ANTHEMIS.

CHARDINIA XERANTHEMOIDES (N.O. *Compositæ*): A pretty little annual herb a few inches high, with lance-shaped hairy leaves, and twigs terminating in solitary silvery flower-heads. Lebanon and Anti-Lebanon, Gilead.

CHEILANTHUS FRAGRANS (N.O. *Filices*): A dwarf fern with a new-hay-like odour. Among hills.

CHEIRANTHUS CHEIRI (N.O. *Cruciferæ*): Wall-flower. Single bright yellow flowers. On maritime clifts, Lebanon.

CHENOLEA ARABICA (N.O. *Chenopodiaceæ*): A low fleecy-canescent shrub. Flowers five to fifteen, in sessile clusters with long floral leaves. Judæan Wilderness, slopes of Dead Sea.

CHENOPODIUM (N.O. *Chenopodiaceæ*): Herbs with flowers in small spiked or panicled clusters.

C. VULVARIA: Goosefoot. Six other species.

CHERRY-TREE. See CERASUS.

CHESTNUT (SPANISH). See CASTANEA.

CHICK-PEA. See CICER.

CHICKWEED. See CERASTIUM and STELLARIA.

CHICORY. See CICHORIUM.

CHLORA PERFOLIATA (N.O. *Gentianaceæ*): Yellow-wort. An erect slender plant with opposite connate stem-leaves; stems forked towards the extremity with a single yellow flower at each fork, and others crowded at the extremity. On bare limestone hills under Lebanon.

CHLORIS VILLOSA (N.O. *Gramineæ*): Belongs to a genus of grasses. Moab.

CHONDRILLA JUNCEA (N.O. *Compositæ*): A herb nearly allied to lettuce, with yellow flower-heads. Maritime hill and mountain regions.

CHORISPORA SYRIACA (N.O. *Cruciferæ*) : An annual plant with oblong, deeply lobed, fleshy leaves; purple, yellow, or white flowers, and a long succulent pod. Allied to cakile (sea-rocket). Universal.

CHRYSANTHEMUM (N.O. *Compositæ*) : Herbaceous or slightly shrubby plants with an involucre composed of scales.

C. CORONARIUM : Conspicuous yellow flowers. Coasts and southern districts, Plain of Philistea, Gilead.

C. MYCONIS : Maritime and central districts.

C. SEGETUM : Corn-marigold. Handsome yellow flowers. Universal in cultivated land.

C. VISCOSUM : Plain of Sharon.

CHRYSOPHTHALMUM MONTANUM (N.O. *Compositæ*) : A perennial herb with wand-like erect stems ; heads many-flowered ; flowerets tubular.

CICER (N.O. *Leguminosæ*) : Annual or perennial herbaceous plants of the vetch tribe, with pinnate leaves, a five-lobed calyx, and pea-like corolla.

C. ARIETINUM : Chick-pea. An annual plant about a foot high, three to seven pairs of leaflets with an odd one at the end, and white or rose-coloured flowers and an edible pod. Cultivated everywhere. Three other species.

CICHORIUM INTYBUS (N.O. *Compositæ*) : Chicory. A perennial plant with pinnate lower leaves and flowers of a brilliant light blue. Waysides, general.

C. DIVARICATUM : General.

CIRSIUM (N.O. *Compositæ*) : Plume-thistle. Thistle-like plants resembling *Carduus*, with purple or yellow flowers.

C. CAPPACEUM (var. *Hermonis*) : Lebanon and Hermon. Eight other species.

CISTUS (N.O. *Cistaceæ*) : Rock-rose, gum-cistus. A genus of the rock-rose family, to which it gives the name ; also called gum-cistus. These shrubs are mostly erect, with opposite simple or toothed leaves, generally oblong, and axillary or terminal flower-stalks, bearing one or many flowers resembling dog-roses, white or pink in colour. See p. 8.

C. CRETICUS: This species has sage-like leaves and rose-coloured flowers, and is the commoner form on the southern hills. The gum from this shrub is said to have been formerly gathered from the beards of goats which are fond of browsing on the foliage.

C. SALVIÆFOLIUS: Flowers white. On the hills everywhere.

C. VITLOSUS (var. *C. incanus*): Flowers rose-coloured. Hill districts east and west of Jordan. Especially plentiful in Carmel.

CITRULLUS COLOCYNTHIS (N.O. *Cucurbitaceæ*): Colocynth (bitter cucumber).

CITRUS AURANTIUM (N.O. *Aurantiaceæ*): Orange.

C. BIGARADA: Seville or bitter orange.

C. LIMONUM: Lemon.

C. LIMONUM (var. *Dulcis*): Sweet-lemon.

C. MADARENSIS: Mandarin orange.

C. MEDICA: Citron. All cultivated. The citron was cultivated by the Jews when they were subject to Rome, and was used then, as now, in the Feast of Tabernacles. It was probably brought from Babylon into Palestine on the return from the captivity, and was indigenous to India.

CLEMATIS (N.O. *Ranunculaceæ*): A large genus of twining shrubs, with a single perianth (a coloured calyx and no petals) and a long feathery tail to the one-seeded carpels.

C. FLAMMULA: A sweet-scented species with white flowers, common in English gardens. On the coast and hills.

C. ORIENTALIS: In the north.

C. VITALBA: Traveller's-joy. On the coast and hills. Two other species.

CLEOME (N.O. *Capparidaceæ*): A genus of beautiful annual plants, mostly of erect habit, with digitate leaves, flowers in racemes with four sepals and four petals, and a pod-like fruit. Chiefly found in the tropical regions of the New World.

C. ARABICA: Lower end of Dead Sea.

C. PENTAPHYLLA: Plain of Sharon. Two other species.

CLOVER. See TRIFOLIUM.

CLUB-MOSS. See SELAGINELLA.

CLYPEOLA (N.O. *Cruciferæ*) : Treacle-mustard. Annual herbs with oblong leaves, and minute yellow racemed flowers.

C. ECHINATA : Hill country east and west of Jordan. Three other species.

CNICUS BENEDICTUS : Blessed thistle. A thistle-like plant with an involucre of leathery bracts, and pappus with three rows of bristles. 'The distilled water hereof is much used to be drunk against agues of all sorts' (Parkinson). In cultivated land.

C. BENEDICTUS (var. *Kotschyi*) : Lebanon.

COCHINEAL CACTUS. See OPUNTIA.

COCKLE. See GITHAGO.

COCK'S-FOOT GRASS. See DACTYLIS.

CODLINS and CREAM. See EPILOBIUM.

COLCHICUM (N.O. *Colchicaceæ*) : Meadow saffron. This genus strongly resembles autumn crocus, but has six stamens. The corms and seeds are used in medicine.

C. DECAISNEI : Lebanon and Anti-Lebanon.

C. FASCICULARE : The Bukâá in dry fields. Seven other species.

COLLADONIA (N.O. *Umbelliferæ*) : Perennial yellow-flowered herbs with pinnate leaves.

C. ANISOPTERA (P.) : All the hills of Central Palestine, etc. Three other species (doubtful).

COLOCYNTH. See CITRULLUS.

COLT'S-FOOT. See TUSSILAGO.

COLUTEA ARBORESCENS (N.O. *Leguminosæ*) : Bladder-senna. A shrub with papilionaceous flowers and bladder-like pods. In the north.

COLUTEOCARPUS RETICULATUS (N.O. *Cruciferæ*) : A perennial tufted herb with white flowers. Alpine and subalpine, Lebanon and Anti-Lebanon.

CONIUM MACULATUM (N.O. *Umbelliferæ*) : Hemlock. An erect branching perennial plant, with much-divided leaves, and the inflorescence a compound umbel. An irritant poison exists in all parts of this plant, especially in the fruit. 'Lurid hemlock tinged with poisonous stains' (Spenser). Gilead, etc.

CONRINGIA (N.O. *Cruciferæ*) : Annual glaucous herbs with clasping stem-leaves and racemed yellow flowers.

C. CLAVATA : Northern mountain region.

C. ORIENTALIS : Leaves oblong. Phœnician coast to Anti-Lebanon and northward.

CONVOLVULUS (N.O. *Convolvulaceæ*) : An extensive genus of twining or trailing annual and perennial plants.

C. ARVENSIS : Small bindweed.

C. HYSTRIX : Southern desert.

C. LINEATUS : Leaves very narrow; flowers flesh-coloured. Under Lebanon, Tabor, Carmel, etc.

C. PALÆSTINUS (P.) : Central Palestine.

C. SEPIUM : Greater bindweed. Eighteen other species and varieties.

CONYZA (N.O. *Compositæ*) : Annual or perennial herbs resembling *Erigeron*.

C. DIOSCORIDES : Ravines down to Dead Sea.

CORCHORUS (N.O. *Tiliaceæ*) : A genus of plants or small shrubs, with simple leaves and yellow flowers produced singly or in clusters opposite the leaves.

C. OLITORIUS : An annual plant with oblong ovate leaves, yellow flowers, and fruit 2 inches long. This plant furnishes jute. Maritime plains.

C. TRILOCOLARIS : Jew's-mallow. The Ghor, north end of the Dead Sea.

CORDIA (N.O. *Boraginaceæ*): A genus of tropical or subtropical trees or shrubs, divided into sections according to the varying character of the calyx. The leaves are alternate, the flowers variously arranged, and the drupaceous fruit is ovate or globose.

C. MYXA: The calyx not grooved, four- to five-toothed. Fruit edible. Cultivated everywhere.

CORIANDRUM SATIVUM (N.O. *Umbelliferæ*): Coriander. This plant has a branching annual stem, the lower leaves pinnately divided in broad-shaped segments, the upper more finely cut; umbels with five to eight rays; flowers whitish or pink. The coriander fruit or seed is globular in shape and aromatic in flavour, and is used in curries, etc. In cultivated ground and Jordan Valley. See p. 12.

C. TORDYLIOÏDES:

CORIARIA MYRTIFOLIA (N.O. *Coriarieæ*): A shrub with opposite simple myrtle-like leaves, flowers in clusters, and fruit of five carpels. This shrub is used to make a black dye.

CORN BLUEBOTTLE. See CENTAUREA.

CORN GROMWELL. See LITHOSPERMUM.

CORNUCOPIA CUCULLATUM (N.O. *Gramineæ*): Horn-of-plenty grass.

CORNUS (N.O. *Cornaceæ*): This genus consists generally of small trees or shrubs, the leaves undivided, flowers with four yellow or white petals. The fruit contains a hard two-celled stone.

C. AUSTRALIS: Lebanon, 4,000 to 5,000 feet.

C. MAS: Cornelian cherry. Middle zone of Amanus, and northward.

CORONILLA (N.O. *Leguminosæ*): Annual or perennial plants. The flowers, which are often yellow, are borne on stalked umbels; the pods are round and nearly straight.

C. SCORPIOÏDES: A much-branched bush, with small wedge-shaped leaflets of pea-green colour and yellow flowers. Mountains, central and east regions. Four other species.

CORYDALIS (N.O. *Fumariaceæ*): Succulent stemmed herbs resembling fumitory, with ternate or twice ternate leaves, and racemose irregular flowers, rose-pink in colour.

C. LIBANOTICA: Neighbourhood of cedars of Lebanon.

C. RUTÆFOLIA: Lebanon and Hermon. Four other species and varieties.

COTONEASTER (N.O. *Rosaceæ*): Small trees or trailing shrubs, with small dark green leaves, white or pinkish flowers, and scarlet berries.

C. NUMMULARIA.

C. PYRACANTHA: Perhaps introduced.

COTTON. See GOSSYPIUM.

COTTON-ROSE. See FILAGO.

COTTON-WEED. See DIOTIS.

COUSINEA (N.O. *Compositæ*): A genus of prickly-leaved thistle-like plants allied to *Carlina*. Their involucres surround a number of yellow or pink florets.

C. PESTALOZZI: Under Anti-Lebanon. Four other species.

COW-PARSNIP. See HERACLEUM.

CRAMBE MARITIMA (N.O. *Cruciferæ*): Seakale. On the coast. Three other species of crambe.

CRANE'S-BILL. See GERANIUM.

CRATÆGUS (N.O. *Rosaceæ*): A genus of moderate-sized trees, commonly called 'thorns.'

C. AZAROLUS: White hawthorn. Universal.

C. MONOGYNA: White hawthorn. Coast and mountain districts, Gilead.

C. ORIENTALIS: Mountain thickets, Gilead and Moab.

CRATÆVA (N.O. *Capparidaceæ*) : A genus of the caper family, consisting of tropical shrubs or trees. The flowers have four sepals and four petals, and are succeeded by a globular berry.

C. GYNANDRA : Garlic pear. Hot sulphurous springs by the east side of the Dead Sea.

CRENULARIA GLAUCESCENS (N.O. *Cruciferæ*) : A variety of cress. Lebanon.

CREPIS (N.O. *Compositæ*) : Hawk's-beard. A genus of herbaceous plants of the chicory tribe.

C. BULBOSA : Maritime districts. Thirteen other species and varieties.

CRESS. See LEPIDIUM and THLASPI.

CRESSA CRETICA (N.O. *Convolvulaceæ*) : A plant which varies much in different localities. It has scattered leaves and crowded flowers in the axils of the uppermost leaves ; the corolla funnel-shaped and five-cleft. Plains of Philistia.

CROCUS (N.O. *Iridaceæ*) : A varying genus with a fleshy corm, grassy leaves, and erect flowers with three stamens.

C. AUREUS : Near Tyre.

C. OCHROLEUCUS : Rocky places, Lower Lebanon, Galilee, etc.

C. SATIVUS : This species yields saffron, which consists of the deep orange-coloured stigmas gathered with part of the style and dried. It flowers in autumn, and the perianth is a light purple. See p. 11.

C. SYRIACUS :

C. ZONATUS : Lebanon. Seven other species and varieties.

CROSS-WORT. See CRUCIANELLA.

CROTALARIA ÆGYPTIACA (N.O. *Leguminosæ*) : A papilionaceous shrub with erect spinescent branches, small ovate leaves, and minute flowers produced in racemes. A native of hot climates. Southern desert, February and March.

CROZOPHORA (N.O. *Euphorbiaceæ*) : A genus of low-growing annual or perennial plants, covered with hair, growing in tropical regions, with small green flowers in racemes, and stalked leaves with oval or heart-shaped blade.

C. OBLIQUA : South of Dead Sea.

C. TINCTORIA : Plains and cultivated lands.

C. VERBASCIFOLIA : Waste and cultivated lands, general.

CRUCIANELLA (N.O. *Rubiaceæ*) : Cross-wort. Annual or perennial herbs with thin leaves in opposite pairs, and funnel-like flowers opening at night.

C. LATIFOLIA : Coast, Carmel, Lebanon. Nine other species and varieties.

CRUPINA (N.O. *Compositæ*) : Annual herbs with few-flowered heads.

C. CRUPINASTRUM : Littoral and Central Palestine.

C. VULGARIS : Carmel, etc.

CRYPSIS ALOPECUROIDES (N.O. *Gramineæ*) : A grass with one-flowered spikelets.

CUCUMBER. See CUCUMIS, ECBALLIUM, CITRULLUS.

CUCUMIS (N.O. *Cucurbitaceæ*) : A genus which contains the cucumber and melon.

C. PROPHETARUM : Globe cucumber. Round Dead Sea.

C. TRIGONUS : Plain of Huleh.

C. SATIVUS (cucumber); C. MELO (melon); C. DUDAIN; C. CHATE; CUCURBITA CITRULLUS (water-melon): All five cultivated, but often found growing spontaneously.

CUMINUM CYMINUM (N.O. *Umbelliferæ*): Cummin. A fennel-like plant with seeds like the caraway. Generally cultivated.

CUPRESSUS SEMPERVIRENS (N.O. *Coniferæ*): Cypress. General on the mountains.

CURRANT. See RIBES.

CUSCUTA (N.O. *Convolvulaceæ*): Dodder. A genus of annual leafless parasitical plants, the stems consisting of wire-like tendrils, which twine round the foster-plant, into which they send aërial roots.

C. ARABICA: Ghor, east side of Jordan.

C. EPITHYMUM: Common on Genista. Four other species.

CYCLAMEN (N.O. *Primulaceæ*): A beautiful genus with tuberous roots; round or ovate leaves often marbled with greyish-white; a five-parted calyx and monopetalous corolla of shaded pink or white.

C. COUM: Deep pink flowers. Subalpine Lebanon.

C. HEDERÆFOLIUM: Sow-bread. Leaves heart-shaped, white or pink flowers.

C. LATIFOLIUM: White or light pink flowers.

C. PERSICUM: Pink flowers. Universal and abundant.

C. REPANDUM.

CYDONIA VULGARIS (N.O. *Rosaceæ*): Quince. Common in cultivation.

CYMBOSERIS PALÆSTINA (N.O. *Compositæ*): An annual herb resembling *Crepis*, with many-flowered heads. Carmel, Tabor, etc.

CYNANCHUM ACUTUM (N.O. *Asclepiadaceæ*): Belonging to a genus of herbs with wheel-shaped corolla. Maritime districts.

CYNARA (N.O. *Compositæ*): The genus containing the artichoke, cardoon, and other prickly plants.

C. SYRIACA: Florets violet. On the coast.

C. SCOLYMUS: Artichoke. Cultivated.

C. CARDUNCULUS: Cardoon. Cultivated.

CYNOCRAMBE PROSTRATA (N.O. *Cynocrambeæ*): Theligonum cynocrambe. A smooth, somewhat succulent herb, with stalked oval leaves and sessile flowers. On walls; general.

CYNODON DOAB (N.O. *Gramineæ*): Bermuda grass. Gennesaret.

C. DACTYLON: Dog's-tooth grass.

CYNOGLOSSUM (N.O. *Boraginaceæ*): Hound's-tongue. Herbs from the temperate zones; the leaves often covered with white hairs; the dull-red or blue flowers in racemes, with a salver-shaped corolla.

C. PICTUM: Blue flowers. Maritime plains, Gennesaret, etc. Two other species.

CYNOMORIUM COCCINIUM (N.O. *Balanophoraceæ*): A curious fleshy-red herbaceous plant, about a foot in height, covered with scales; the perianth in six divisions; the heads of flowers surrounded by numerous scales. On sands on the coast; parasitic on roots.

CYNOSURUS ECHINATUS (var. *Elegans*) (N.O. *Gramineæ*): Rough dog's-tail grass. Mount Tabor.

CYPERUS (N.O. *Cyperaceæ*): A genus of grass-like plants giving its name to the sedge family.

C. FLAVESCENS: General.

C. GLOBOSUS: Northern Palestine. Thirteen other species.

CYPHOMATTIA LANATA (N.O. *Boraginaceæ*): Northern hills.

CYPRESS. See CUPRESSUS.

CYSTOPTERIS FRAGILIS (*Filices*): Brittle bladder-fern. Lebanon, 6,000 feet.

CYTINUS HYPOCISTUS (N.O. *Cytinaceæ*): A root-parasite, which rises to a few inches above the ground in a tuft of succulent stems, terminating in a head of flowers; the whole plant of a rich yellow or orange-red colour. Littoral districts on Cistus.

CYTISOPSIS DORYCNIIFOLIA (N.O. *Leguminosæ*): A small prostrate perennial with sessile leaves covered with silvery hairs, axillary yellow flowers, and long narrow pods.

CYTISUS (N.O. *Leguminosæ*): A well-known and varying genus of trees and shrubs, generally thornless.

C. SYRIACUS (P.): Lebanon. Four other species.

D.

DACTYLIS GLOMERATA (N.O. *Gramineæ*): Cock's-foot grass. In waste land. One other species.

DÆMIA CORDATA (N.O. *Asclepiadaceæ*): A twining climbing shrub, the young branches twining round the old, with whitish-yellow flowers. Wâdy Zuweireh, etc. Always on sulphur.

DAISY. See BELLIS.

DAMASONIUM BOURGÆI (N.O. *Alismaceæ*): An aquatic herb, also known under the name of *Actinocarpus Damasonium*. It has a tuft of radical leaves, from which issues a flower-stem bearing two whorls of white flowers. In dry ditches.

DANDELION. See TARAXACUM.

DAPHNE (N.O. *Thymelaceæ*): A well-known genus of shrubs with a tubular calyx and no petals. Many of the species have scented and beautiful flowers, and all have a more or less stringy bark.

D. SERICEA: Lower wooded regions.

D. GNIDIOIDES: Lebanon and Anti-Lebanon. Three other species.

DATE-PALM. See PHŒNIX.

DATISCA (N.O. *Datiscaceæ*): Annual herbaceous plants with pinnate alternate leaves and racemose greenish flowers.

D. CANNABINA: Sides of mountain streams.

DATURA (N.O. *Solanaceæ*): A genus known by its tubular calyx, which falls off as the fruit ripens. The corolla is funnel-shaped.

D. STRAMONIUM: Thorn-apple. Large ovate leaves; flowers generally white, but in hot climates pink or purple; capsule ovate and spiny, bursting by four valves. Near towns and among ruins; general.

DAUCUS (N.O. *Umbelliferæ*): Dwarf plants with thin deeply-cut leaves, flower-stems 2 or 3 feet high, bearing a number of small white or rose-coloured flowers.

D. CAROTA: Carrot. General.

D. MAXIMUS: Galilee and Anti-Lebanon. Eight other species and varieties.

DEAD-NETTLE. See LAMIUM.

DELPHINIUM (N.O. *Ranunculaceæ*): Larkspur. A genus of herbaceous plants, widely distributed in temperate regions, with erect branching stems and finely-cut leaves. The flowers are in loose racemes, with coloured sepals, the upper one prolonged into a tapering spur.

D. AJACIS: This species derives its name from the markings on the petals, which resemble the letters AIAI (alas!). Hence it has been conjectured to be the 'hyacinth' of the ancients, described as having similar markings.*

'For aye,
Oh hyacinths, your AI keep still;
Nay, with more marks of woe your leaves now fill.'
DRUMMOND.

'The letter'd hyacinth of darksome hue.'

* Miss Constance Garlick, who has carefully studied this subject, considers that the *Fritillaria Meleagris* has the strongest claim to be the 'hyacinth' of the Apollo myths, from its colour, resembling the jacinth, its chequered flowers, and the pathetic droop of its bells.

D. AXILLIFLORUM: Cultivated generally; wild about Hermon. Eleven other species.

DESERT-SPIKE. See EREMOSTACHYS.

DEVERRA (N.O. *Umbelliferæ*): An African genus, characterized by a round or ovate fruit, covered with scales or hairs. The species have a broom-like aspect.

D. TORTUOSA: Southern desert.

DIANTHUS (N.O. *Sileneæ*): The pink. An extensive genus, with leaves often rigid, glaucous, and grass-like; flowers crimson or pink.

D. ARMERIA: An annual with clustered flowers.

D. CARYOPHYLLUS: Clove-pink. A perennial, the origin of the garden carnations.

D. JUDAICUS (P.): Hills surrounding the Dead Sea. Sixteen other species and varieties.

DICTAMNUS FRAXINELLA (N.O. *Rutaceæ*): Belongs to a genus of perennial plants with unequally pinnate leaves. The five petals are of unequal size, the four upper ones erect and the lowest one bent downwards. Northern woods.

DIDISMUS (N.O. *Cruciferæ*): A genus with pods breaking across into joints with one or two seeds in each. Flowers white or yellow.

D. ÆGYPTIACUS: Gennesaret.

D. ROSTRATUS (P.): Central hill district.

DIGITALIS (N.O. *Scrophulariaceæ*): Foxglove. A genus of biennial or perennial plants with erect stem, alternate leaves, and flowers with the calyx deeply divided into five unequal segments.

D. FERRUGINEA: Flowers brown. Lebanon.

DIGITARIA SANGUINALIS (N.O. *Gramineæ*): Belongs to a genus of grasses with inflorescence in fingered spikes. Moab.

DILL. See ANETHUM.

DIOSPYRUS (N.O. *Ebenaceæ*): A genus of large hard-wooded trees (rarely shrubs), several species of which yield the wood called ebony.

D. LOTUS: Cultivated.

DIOTIS MARITIMA (N.O. *Compositæ*): Cotton-weed. An erect perennial herb clothed with dense greyish wool, with ear-like corolla lobes. Maritime sands.

DIPLOTAXIS (N.O. *Cruciferæ*): A genus of unimportant herbaceous plants allied to *Sinapis*.

D. VIMINEA: Among stone-heaps everywhere. Three other species.

DIPSACUS SYLVESTRIS (var. *Cornosus*) (N.O. *Dipsacaceæ*): Wild-teazel. Belonging to a genus of prickly biennial plants. Lebanon; near Dimas.

DOCK (CURLED, etc.). See RUMEX.

DODDER. See CUSCUTA.

DOLICHOS (N.O. *Leguminosæ*): A genus of herbaceous or shrubby species, mostly with twining stems. The leaves are trifoliate and the flowers solitary or in racemes.

D. LABLAB: Produces edible legumes. El Huleh.

DORYCNIUM (N.O. *Leguminosæ*): A genus of erect herbs nearly related to *Lotus*, with sessile leaves and small pink or white flowers collected into heads like clover.

D. HIRSUTUM and var. SYRIACA: Lebanon and Anti-Lebanon. Two other species and one variety.

DRABA (N.O. *Cruciferæ*): Whitlow-grass. Small annual or perennial herbaceous plants.

D. AIZOÏDES: A species with glossy leaves margined with hairs, and bright yellow flowers. Lebanon. Three other species.

DRACUNCULUS (N.O. *Araceæ*): Resembling the *Arum*, except that the upper part of the spathe is flat, not convolute.

D. CRINITIS.

D. VULGARIS : Dragon-arum. Pedately divided leaves and spotted stems; spathe of port-wine colour.

DROSERA (N.O. *Droseraceæ*) : Sundew. A genus of plants of which the leaves spring from the root in a radiating manner, and are thickly set with hairs. Each hair is tipped with a minute drop of viscid fluid. The flowers are small and inconspicuous.

D. ROTUNDIFOLIA.

DUCKWEED. See LEMNA.

E.

ECBALLIUM ELATERIUM (N.O. *Cucurbitaceæ*) : The squirting cucumber. An annual plant with prostrate branching stems and heart-shaped rough leaves. Fruit, a small elliptical greenish gourd which forcibly ejects its seeds. Very common in sandy plains. See Illustration XXXIII.

ECHINOPS (N.O. *Compositæ*) : Globe-thistle. A genus with heads one-flowered, and arranged in dense round clusters at the ends of the branches.

E. GAILLARDOTI (P.) : Phœnician Plain and Lebanon.

E. SPINOSUS : Near Gaza. Four other species and one variety.

ECHINOSPERMUM (N.O. *Boraginaceæ*) : Hairy herbs resembling *Myosotis*, with narrow leaves and blue flowers in racemes.

E. BARBATUM : Anti-Lebanon district.

E. SPINOCARPOS : Southern desert.

ECHIOCHILON FRUTICOSUM (N.O. *Boraginaceæ*) : A low shrub growing in sand of coasts and deserts. Flowers solitary. Coast from Beyrout to Jaffa, and southward to Sinai.

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XXXIII.—ECBALLIUM ELATERIUM : SQUIRTING CUCUMBER.

XXXIV.—GALEGA OFFICINALIS : GOAT'S-RUE.

ECHIUM (N.O. *Boraginaceæ*): Viper's bugloss. Bristly plants, mostly herbaceous; the flowers in small curled spikes arranged in a compound spike; the corolla tubular and bell-shaped, blue or purple.

E. ITALICUM: Maritime plains.

E. VIOLACEUM: Plain of Gennesaret, etc. Eight other species and one variety.

ELÆAGNUS ANGUSTIFOLIA (N.O. *Elæagnaceæ*): Oleaster or oil-tree. A small tree resembling the true olive. It has a hard fine wood, and yields an inferior oil. In every part of Palestine above the Jordan Valley.

ELATINE (N.O. *Elatinaceæ*): Waterwort. A genus of dwarf annual aquatics with rooting pipe-like stems and opposite leaves.

E. CAMPYLOSPERMA: On the Philistian plain.

ELM. See ULMUS.

ELYMUS CRINITUS (N.O. *Gramineæ*): A lyme-grass.

E. CAPUT MEDUSA: Medusa's head. One other species.

EMEX SPINOSUS (N.O. *Polygonaceæ*): A salt-marsh annual resembling closely the fiddle-dock. Littoral districts, inland plains, and Jordan Valley.

ENARTHROCARPUS (N.O. *Cruciferæ*): A genus of rough annuals with lyre-shaped root-leaves, toothed stem-leaves, and long racemes of yellow or purplish flowers.

E. ARCUATUS: Northern Palestine.

E. STRANGULATUS: By the Dead Sea.

EPHEDRA (N.O. *Gnetaceæ*): Branching shrubs, natives of temperate sandy seashores, with small scale-like leaves, and pistils and stamens in different flowers. The staminate flowers in catkins, the pistillate flowers terminal.

E. FRAGILIS: Rocky ledges in Moab. Two other species.

EPILOBIUM (N.O. *Onagrariæ*) : A large genus of mostly perennial and erect herbaceous plants, with opposite leaves and flowers in axillary or terminal spikes, generally purple.

E. ANGUSTIFOLIUM : Rose-bay or willow-herb. Lebanon.

E. HIRSUTUM : Codlins and cream, and var. *Tomentosum*. Coast and mountain regions. Four other species and one variety.

EPIPACTIS (N.O. *Orchideæ*) : Terrestrial orchids. Erect herbs with fibrous roots, a leafy stem, and a loose simple raceme of purple-brown or white flowers, sometimes tinged with red.

E. LATIFOLIA : Broad-leaved helleborine.

E. VERATRIFOLIA : Lebanon, Phœnicia, Galilee.

EQUISETUM (N.O. *Equisetaceæ*) : Horsetail family. Leafless plants with rush-like hollow jointless stems, terminated by a cone or spike composed of scales.

E. RAMOSUM : Pale green or glaucous. Moist places and sands.

E. TELMATEIA : Coast to middle mountain zone.

ERAGROSTIS PLUMOSA (N.O. *Gramineæ*) : A handsome grass resembling *Festuca*. South end of Dead Sea. One other species.

EREMOBIUM LINEARI (N.O. *Cruciferæ*) : An annual herb, doubtfully distinguished from *Malcolmia*. Flowers in racemes. Sandy desert south of Beersheba.

EREMOSTACHYS LACINIATA (N.O. *Labiatæ*) : Desert-spike. A handsome perennial with yellow flowers ; the upper lip of the corolla is elongated and helmet-like, the lower lip has three spreading rounded lobes. Universal in warmer parts.

EREMURUS (N.O. *Liliaceæ*) : A genus closely allied to *Asphodelus*, with linear-radical leaves and racemes of yellow or white flowers.

E. LIBANOTICUS, E. SPECTABILIS : Lebanon and Anti-Lebanon.

ERIANTHUS RAVENNÆ (N.O. *Gramineæ*): A grass resembling *Saccharum.*

ERICA (N.O. *Ericaceæ*): Shrubby plants of the heath-wort order, with four-leaved calyx and four-lobed corolla.

E. VERTICILLATA: Mediterranean Heath. Fine leaves and pale grey flowers. Lower Lebanon, near the coast.

ERIGERON (N.O. *Compositæ*): Small herbaceous plants with radiate flowers.

E. ÆGYPTIACUM: Lower Jordan Valley. Three other species and one variety.

ERODIUM (N.O. *Geraniaceæ*): Stork's-bill. This genus is known by having five of its ten stamens without anthers and the tails of the carpels bearded on the inside.

E. GAILLARDOTI (P.): Northern parts.

E. ROMANUM: Lower parts of Lebanon and Anti-Lebanon. Eleven other species and varieties.

EROPHILA (N.O. *Cruciferæ*): Distinguished from *Draba* by having the petals bifid and numerous seeds in each cell of the pod.

E. SETULOSA (P.): Fields near Sidon. Three other species.

ERUCA SATIVA (N.O. *Cruciferæ*): An erect annual, allied to *Sinapis*, with pinnatifid acrid leaves, used as a salad, and large white flowers veined with purple. General.

ERUCARIA (N.O. *Cruciferæ*): Annual plants with smooth pinnatifid leaves and racemes of white or purplish flowers.

E. ALEPPICA and var. PUBERULA: On barren hills and Judæan wilderness; Mount Nebo. Three other species.

ERVUM (N.O. *Leguminosæ*): A genus of weak-stemmed annuals with pinnate leaves generally terminating in tendrils. Allied to *Vicia.*

E. LENS: The common lentil. Pale blue flowers in twos and threes; pods nearly as broad as long. General. Wild and cultivated. Two other species.

ERYNGIUM (N.O. *Umbelliferæ*): Eryngo A genus of glaucous thistle-like plants with spiny leaves and hemispherical heads of sessile flowers, the base of which is surrounded by a whorl of bracts, frequently rigid and spiny.

E. CRETICUM: Coast, plains, and Jordan Valley. Universal. Six other species. See p. 22.

'Eryngo, to the threat'ning storm,
With dauntless pride uprears
His azure crest and warrior form,
And points his spears.'

ERYSIMUM (N.O. *Cruciferæ*): Generally biennial plants with narrow leaves and terminal racemes of yellow or rarely white flowers.

E. PURPUREUM: Round Hermon and Lebanon.

E. SMYRNÆUM; Under Hermon. Six other species.

ERYTHRÆA (N.O. *Gentianeæ*): Herbaceous plants with simple or branched stems, and pink or pale yellow flowers in panicles.

E. CENTAURIUM: Centaury. Lebanon, lower region.

E. MARITIMA: Northern coast.

ERYTHROSTICUS PALÆSTINUS (N.O. *Colchicaceæ*): A cormous low herb, the leaves forming an involucre for the crowded corymbed flowers; the perigonium lilac. Round Dead Sea and Jordan Valley in April.

EUCLIDIUM SYRIACUM (N.O. *Cruciferæ*): A small annual with stiff branches, runcinate root-leaves and spikes of small white flowers. Fields and scrub.

EUONYMUS EUROPÆUS (N.O. *Celastrineæ*): Spindle-tree. A familiar shrub or small tree with ovate leaves, pale green flowers, and pink seed-vessels. Northern Lebanon.

EUPATORIUM CANNABINUM (var. *Syriacum*) (N.O. *Compositæ*): Hemp agrimony. A tall plant with unbranched stems, downy leaves, and crowded dull pale purplish flowers. General in moist and shrubby places east and west of Jordan.

EUPHORBIA (N.O. *Euphorbiaceæ*): Spurge. This genus comprises a very large number of species, all having a milky juice. In temperate regions they are mostly herbaceous; in hot climates, of shrubby habit. The flowers are collected into heads surrounded by bracts. These flower-heads are placed in umbels round the top of the stem. The leaves are very various.

E. PEPLIS: Purple spurge. On the coast; common, Moab.

E. ALTISSIMA: Moist places under Anti-Lebanon.

E. BERYTHÆA (P.): Rocks on Phœnician coast.

E. CAUDICULOSA (P.): Top of Lebanon and Hermon

E. CHAMÆPEPLUS (P.): Near Jerusalem, etc.

E. HIEROSOLYMITANA (P.): Jerusalem, Anti-Lebanon.

E. REUTERIANA (P.): Cultivated land; general.

Thirty-four other species and varieties.

EUPHRAYIA (N.O. *Scrophulariaceæ*): Bartsia. A small annual, growing 6 or 8 inches high, resembling *Rhinanthus*.

E. LATIFOLIA: The Bukââ, etc.

E. VISCOSA: Yellow bartsia. Bright green leaves and solitary flowers. On the coast and Upper Jordan.

EVAX (N.O. *Compositæ*): Minute tufted annual herbs clothed with white wool.

E. PALÆSTINA: Central hill range from Jordan northwards. Four other species.

EVERLASTING. See GNAPHALIUM and HELICHRYSUM.

EXOACANTHA HETEROPHYLLA (N.O. *Umbelliferæ*): An annual herb, the flowers with unequal rays. In fertile ground throughout the country.

F.

FAGONIA (N.O. *Zygophyllaceæ*): Perennial much-branched, often prostrate, herbs, with opposite leaves and single flowers.

F. GLUTINOSA: Hot valleys about the Dead Sea, and southward to Sinai.

F. SINAICA: Rocky hills south-east of Dead Sea. Ten other species and varieties.

FALCARIA (N.O. *Umbelliferæ*): Smooth biennial or perennial herbs with white flowers.

F. RIVINI: Common in middle mountain zone, April to October.

FALSE FLAX. See CAMELINA.

FARSETIA (N.O. *Cruciferæ*): Small plants allied to *Alyssum*, often shrubby at the base, with white, yellow, or purple flowers.

F. ÆGYPTIACA: Round the Dead Sea.

F. INCANA: Eastern desert.

F. OVALIS (N.O. *Cruciferæ*): South end of Dead Sea.

FENNEL. See FŒNICULUM.

FENNEL-FLOWER. See NIGELLA.

FERULA (N.O. *Umbelliferæ*): A genus with pithy stems, deeply divided leaves, and compound umbels.

F. HERMONIS (P.): Hermon.

F. SANCTA: Esdraelon. Three other species.

FERULAGO (N.O. *Umbelliferæ*): Perennial, often tall, yellow-flowered herbs, with variously compound leaves.

F. SYRIACA: Rocky places, Judæa, and Lebanon; June and July. Four other species and one variety.

FESCUE-GRASS. See FESTUCA.

FESTUCA MARITIMA (N.O. *Gramineæ*): Sea fescue-grass. Caiffa.

F. MYURUS: Wall fescue-grass.

F. RIGIDA: Hard fescue-grass. Caiffa. Two more species.

FIBIGIA (N.O. *Cruciferæ*): Perennial herbs or low shrubs, tomentose with stellate hairs; the racemose flowers are yellow in colour.

F. CLYPEATA: Rocky places in mountains. Four other varieties (Post).

FICUS CARICA (N.O. *Urticaceæ*): Fig-tree. Wild in fissures of rocks, walls, etc., from Lebanon to south of Dead Sea. Cultivated everywhere. At Engedi the fig-tree yields throughout the year. See p. 31.

F. PSEUDOSYCAMORUS: The Ghor; east of Dead Sea.

F. SYCAMORUS: Sycamore fig. On the coast and in the Jordan Valley.

FIELD-MADDER. See SHERARDIA.

F. SCABIOUS. See KNAUTIA.

FIG-TREE. See FICUS.

FIG-WORT. See SCROPHULARIA.

FILAGO (N.O. *Compositæ*): Cotton-rose. A genus of annuals of low stature, with downy leaves and inconspicuous 'everlasting' flowers.

F. GERMANICA: This plant has an erect stem, terminating in a globular head of small flowers, from the base of which spring two or three more branches ending in like manner. The old botanists named it *Herba impia*, implying that the offspring were unduly elevating themselves above the parent. Four other species and varieties.

FIMBRISTYLIS (N.O. *Cyperaceæ*): A genus of grass-like tufted plants having the inflorescence in spikes.

F. DICHOTOMA: Marshes; littoral district.

F. FERRUGINEA: Gravelly streams and marshes, coast.

FLAX. See LINUM.

FLEABANE. See PULICARIA.

FLIX-WEED. See SISYMBRIUM.

FLOWERING RUSH. See BUTOMUS.

FŒNICULUM (N.O. *Umbelliferæ*): A genus of plants with finely dissected leaves, yellow flowers, and no involucres.

F. OFFICINALE: Fennel. Plain above Lake Huleh.

F. PIPERITUM: Lebanon and hills of Galilee.

FONTANESIA PHILLYREOIDES (N.O. *Oleaceæ*): A Syrian shrub with lance-shaped leaves and white clustered flowers, with a four-cleft calyx and four petals. North of Lebanon.

FORSKAHLEA (N.O. *Urticaceæ*): Branching herbs with tough stems covered with stinging hairs, lance-shaped or ovate leaves, and minute flowers enclosed in an involucre.

F. TENACISSIMA: East and west sides of Dead Sea, etc.

FOXGLOVE. See DIGITALIS.

FRANCŒARIA CRISPA (N.O. *Compositæ*): An erect, somewhat shrubby, tomentose plant, with short oblong leaves, much waved at the margins, and the flowers in yellow terminal heads. Wâdys, south of Dead Sea.

FRANKENIA (N.O. *Frankeniaceæ*): A genus of small heath-like herbs, with the petals furnished with claws.

F. HIRSUTA: On the coast.

F. PULVERULENTA: On the coast.

FRAXINUS (N.O. *Oleaceæ*): The ash.

F. ORNUS: Lower Lebanon.

F. OXYPHYLLA (var. *Syriaca*). General by water-side.

F. PARVIFOLIA. Northern mountains.

FRITILLARIA (N.O. *Liliaceæ*): A genus of bulbous perennials with erect annual stems; alternate, somewhat whorled leaves; nodding bell-shaped flowers, solitary, in racemes, or collected in a whorl under a tuft of leaves.

F. PERSICA : Esdraelon.

F. TULIPIFOLIA : Northern hills. Five other species.

FUMANA (N.O. *Cistaceæ*) : A genus resembling *Helianthemum*, with yellow flowers.

F. PROCUMBENS : Near Beyrout. Four other species and one variety.

FUMARIA (N.O. *Fumariaceæ*) : Fumitory. Small slender herbs, with weak climbing or straggling stems, decompound leaves, and clusters of small tubular, irregular, pink flowers tipped with white or purple.

F. CAPREOLATA : Coast region.

F. GAILLARDOTI (P.) : Fields on the coast.

F. OFFICINALIS : In the north.

F. OXYLOBA (P.) : Mounts Carmel and Gerizim. Seven other species and one variety.

FUMITORY. See FUMARIA.

G.

GAGEA (N.O. *Liliaceæ*) : A genus resembling *Ornithogallum* (star-of-Bethlehem), with linear root-leaves, a scape with an umbel of greenish-yellow flowers, and a three-celled capsule.

G. ARVENSIS : Northern districts, fields, and brushwood.

G. RETICULATA : Coast and hill districts. Eleven other species and varieties.

GALACTITES (N.O. *Compositæ*) : Thistles resembling *Cnicus*, with pinnatifid leaves and flower-heads containing white or pink florets.

G. TOMENTOSA :

GALEGA (N.O. *Leguminosæ*) : Smooth erect perennial herbs with pinnate leaves and racemes of lilac or white flowers.

G. OFFICINALIS : Goat's-rue. Lilac flowers. The Bukââ. See Illustration XXXIV.

GALIUM (N.O. *Rubiaceæ*): Herbs sometimes shrubby at base, with white or yellow flowers, in cymes, or panicles, or solitary. All have square stems and whorled leaves.

G. Bocconi: Pine-forests of Gilead, spring.

G. orientale: Lebanon and Hermon, summer. About fifty-nine other species and varieties.

GARHADIOLUS HEDYPNOIS (N.O. *Compositæ*): Waste lands; general.

GARIDELLA UNGUICULARIS (N.O. *Ranunculaceæ*): An erect annual resembling *Nigella*. Throughout Palestine.

GARLIC PEAR. See CRATÆVA.

GASTRIDIUM (N.O. *Gramineæ*): An annual grass.

G. lendigerum: Anti-Lebanon.

GENISTA (N.O. *Leguminosæ*): Small branching shrubs, sometimes armed with spines; with simple or trifoliate leaves and yellow flowers, produced singly, or in racemes or clusters; corolla papilionaceous.

G. libanotica (P.): Lebanon and Anti-Lebanon.

G. sphacelata (P.): Central parts, Carmel, Gilead. Four other species.

GERANIUM (N.O. *Geraniaceæ*): Crane's-bill. Annual or perennial herbs, rarely shrubby at the base; generally with one or two flowers on a stalk.

G. subcaulescens: Subalpine and Alpine Lebanon.

G. tuberosum: Roots tuberous, stems hirsute, leaves nearly round, petals purple. Generally distributed. Twelve other species and varieties.

GERMANDER. See TEUCRIUM.

GERMANDER SPEEDWELL. See VERONICA.

GEROPOGON (N.O. *Compositæ*): An annual smooth herb allied to *Tragopogon*, with simple elongated leaves and capitules of purplish flowers.

G. glabrum: Coast, Carmel, Galilee.

GEUM (N.O. *Rosaceæ*): Perennial herbs with odd pinnatisect leaves, a five-cleft calyx, and five petals.

G. URBANUM: Goldy, star-of-the-earth, city avens, wood avens, herb bennet. Leaves glossy green; flowers erect, yellow. This plant, the 'blessed herb' of old days, was used as a design for architectural decoration. It was also valued medicinally. 'The root in spring-time, steeped in wine, doth give it a delicate savour and taste; and being drunk fasting every morning, it comforteth the heart.' Woods in northern districts.

G. HETEROCARPUM: Early summer. Galilee, Lebanon.

GIPSY-WORT. See LYCOPUS.

GITHAGO (N.O. *Sileneæ*): Cockle. Annual herbs with erect forked stems and handsome flowers.

G. GRACILIS.

G. SEGETUM: Corn-cockle. Purple calyx lobes.

GLADIOLUS (N.O. *Iridaceæ*): Sword-lily. A large genus of beautiful plants, with a fleshy corm, erect stem, terminating in a spike of flowers, and grass-like or rush-like leaves.

G. COMMUNIS: Perhaps introduced.

G. BYZANTINUS: Galilean hills.

G. SEGETUM: In cornfields. Three other species and one variety.

GLASSWORT. See SALICORNIA.

GLAUCIUM (N.O. *Papaveraceæ*): Horned poppy. Annual, biennial, or perennial herbs with deeply-cut glaucous leaves; buff, yellow, or rarely scarlet flowers; and very long, curved, pod-like capsules.

G. CORNICULATUM (var. *Phœnicium*): Petals orange-coloured, generally with a purple spot at base. April to June. Fields and roadsides; general.

G. FULVUM: Perhaps a variety of *G. luteum*.

G. LUTEUM: Glaucous. Petals yellow. Rocky and sandy places along coast. Three other species.

GLINUS (N.O. *Molluginea*) : Annual prostrate branched herbs, rarely undershrubs. Leaves alternate; flowers inconspicuous.

G. DICTAMNOIDES : Under Hermon.

G. LOTOÏDES : On the coast.

GLOBE AMARANTHUS. See GOMPHRENA.

GLOBE-THISTLE. See ECHINOPS.

GLOBULARIA (N.O. *Globulariaceæ*) : Herbs, shrubs, or undershrubs with alternate simple leaves and globular heads of blue flowers.

G. ARABICA : In the Wâdy Arabah, south of the Dead Sea. Two other species.

GLOSSONEMA BOVEANUM (N.O. *Asclepiadaceæ*) : A hoary perennial branching herb, with opposite leaves, and small flowers. Gorges east of the Dead Sea.

GLYCYRRHIZA (N.O. *Leguminosæ*) : Liquorice. Perennial herbs with a sweet root, odd pinnate leaves, axillary racemes or heads, and bluish or violet flowers.

G. GLABRA : This species furnishes the officinal liquorice. Widely distributed. Four varieties, and one other species, *G. echinata*, which also furnishes liquorice.

GLYCYRRHIZOPSIS FLAVESCENS (N.O. *Leguminosæ*) : A perennial yellow-flowered herb. Northern mountains.

GNAPHALIUM (N.O. *Compositæ*) : The everlasting. Annual or perennial woolly herbs.

G. LUTEO-ALBUM : Heads small, in leafless clusters; involucre bell-shaped. Sandy places; common in summer.

GOAT'S-RUE. See GALEGA.

GOLD OF PLEASURE. See CAMELINA.

GOLDEN ROD. See SOLIDAGO.

GOLDEN SAMPHIRE. See INULA.

GOMPHOCARPUS (N.O. *Asclepiadaceæ*): Shrubs or herbs with opposite leaves and generally showy flowers.

G. FRUTICOSUS: Wâdy Zuweirah and south-east of the Dead Sea.

G. SINAICUS: Wâdys south of the Dead Sea.

GOMPHRENA (N.O. *Amaranthaceæ*): Undershrubs or herbs with opposite leaves and flowers in lax spikes or panicles, or in globular heads.

G. GLOBOSA: Globe amaranthus. Probably introduced.

GONOCYTISUS (N.O. *Leguminosæ*): Tall shrubs with slender green branches; all the leaves, except the upper, trefoil; and small yellow flowers in racemes.

G. PTEROCLADUS: Dry hills, coast, etc.

GOOSE-FOOT. See CHENOPODIUM.

GOSSYPIUM (N.O. *Malvaceæ*): Cotton. A large genus of herbaceous or shrubby perennial plants; the leaves generally heart-shaped; the flowers handsome; the fruit a three- or five-celled capsule.

G. HERBACEUM: The indigenous Indian species. The seeds are woolly, and yield a very short-stapled cotton. The flowers are yellow, with a red spot, large, and cup-shaped. Cultivated. See p. 16.

GRAPE-HYACINTH. See MUSCARI.

GROMWELL. See LITHOSPERMUM.

GROUND-CHERRY. See PHYSALIS.

GUM-CISTUS. See CISTUS.

GUNDELIA TOURNEFORTII (N.O. *Compositæ*): A milky, prickly herb with aspect of *Eryngium*. Hills and waste places, Lebanon, Nazareth, etc.

GYMNARRHENA (N.O. *Compositæ*): Nearly stemless herbs with crowded heads.

G. MICRANTHA: Dead Sea, Jordan Valley, etc.

GYMNOCARPUM (N.O. *Paronychiaceæ*): Branching shrubs resembling *Salsola*, with opposite leaves and flowers in varying cymes.

G. FRUTICOSUM: Hot valleys and rocks about the Dead Sea, and southwards.

GYMNOGRAMMA LEPTOPHYLLA (N.O. *Filices*): Belongs to a genus of polypodiaceous ferns. A dwarf annual, with light green foliage. Mount Carmel and central hills.

GYPSOPHILA (N.O. *Sileneæ*): Herbs, rarely shrubs, with narrow leaves and white or pink flowers.

G. DAMASCENA: Barren hills, Anti-Lebanon, etc.

G. LIBANOTICA: Cedars of Lebanon, Hermon.

G. ROKEJEKA: Wilderness of Judæa towards Dead Sea; ruins in Moab.

G. VISCOSA: Fields in the northern plains. Sixteen other species and varieties.

H.

HABROZIA SPINULIFLORA (N.O. *Paronychiaceæ*): A small annual oriental herb, with slender stems, bristly leaves, and clusters of flowers. The Hauran.

HAGIOSERIS (N.O. *Compositæ*): Annual herbs with yellow flowers, allied to *Picris*.

H. GALILÆA (var. *Diffusa*): Hill country east and west of Jordan. Maritime plains, etc.

HALOPEPLIS AMPLEXICAULIS (N.O. *Chenopodiaceæ*): An annual herb with few leaves, and flowers three together. Coast near Gaza and southwards.

HALOXYLON (N.O. *Chenopodiaceæ*): Shrubs with jointed branches, minute leaves, and solitary axillary flowers.

H. ARTICULATUM: Southern desert, Hauran.

H. SALICORNIOIDES: Judæan wilderness.

HAPLOPHYLLUM (N.O. *Rutaceæ*): Perennial plants or undershrubs, distinguished from *Ruta* by their simple leaves and five- to six-parted flowers.

H. CORYMBULOSUM (P.): Jericho.

H. FRUTICOSUM: Bare hills in the north.

H. LONGIFOLIUM (P.): Ravines of the Dead Sea. Three other species and one variety.

HARD FERN. See LOMARIA.

HARE'S-EAR. See BUPLEURUM.

HARE'S-TAIL GRASS. See LAGURUS.

HART'S-TONGUE FERN. See SCOLOPENDRIUM.

HAWK'S-BEARD. See CREPIS.

HAWKWEED. See HIERACIUM.

HAWTHORN. See CRATÆGUS.

HEDERA HELIX (N.O. *Araliaceæ*): Ivy. Lebanon.

HEDGE-PARSLEY. See TORILIS.

HEDYPNOIS (N.O. *Compositæ*): A cichoraceous plant with toothed leaves and yellow flowers.

H. CRETICA, H. POLYMORPHA: Maritime and central regions, etc.

HEDYSARUM (N.O. *Leguminosæ*): Herbaceous or shrubby plants with seed-pod composed of numerous one-seeded joints, pinnate leaves, and spikes of purple, white, or cream-coloured flowers.

H. SPINOSISSIMUM: Maritime hills. Two other species and one variety.

HELDREICHIA (N.O. *Cruciferæ*): Perennial smooth herbs with white flowers.

H. BUPLEVRIFOLIA (var. *Subtriloba*): Top of Lebanon.

HELEOCHARIS PALUSTRIS (N.O. *Cyperaceæ*): Spike-rush. Marshes and wet places; general.

H. MACRANTHA (P.) : Coast near Beyrout.

HELIANTHEMUM (N.O. *Cistaceæ*) : Low shrubby plants closely allied to *Cistus*, with less showy flowers, yellow, white, and pink in colour.

H. ÆGYPTIACUM : On the hills east and west.

H. NILOTICUM : Hill districts.

H. UMBELLATUM (var. *Syriacum*) : Linear leaves ; flowers in umbels, yellow petals. Subalpine Lebanon. Nineteen other species and varieties.

HELICHRYSUM (N.O. *Compositæ*) : 'Everlasting.' Herbaceous or shrubby plants, with radiated flower-heads of the texture commonly called 'everlasting,' and yellow, white, pink, or crimson in colour.

H. SANGUINEUM : Small red everlasting.

H. SICULEM : Littoral region. Four other species and one variety.

HELICOPHYLLUM (N.O. *Araceæ*) : Cormous herbs with more or less dissected leaves appearing with the flowers.

H. CRASSIPES : Fields, common.

HELIOTROPIUM (N.O. *Boraginaceæ*) : Heliotrope. Herbs or undershrubs, with simple oval, oblong, or lanceolate leaves, and a salver-shaped corolla.

H. ALEPPICUM : Phœnicia.

H. EUROPÆUM : On the coast and inland plains. Ten other species.

HELLEBORINE. See CEPHALANTHERA and EPIPACTIS.

HELLEBORUS (N.O. *Ranunculaceæ*) : Hellebore. Perennial low-growing plants with palmate leathery leaves.

H. FŒTIDUS : Bear's-foot. Flowers numerous, in a large spreading panicle. Doubtfully indigenous.

H. ORIENTALIS : In the north. Greenish white flowers.

HELMINTHIA ECHIOIDES (N.O. *Compositæ*): Ox-tongue. A common wayside plant of the chicory tribe, with hispid stems and leaves, and small dull yellow flower-heads. General.

HELOSCIADIUM NODIFLORUM (N.O. *Umbelliferæ*): A plant resembling watercress, and often found with it. Jordan Valley, etc.

HEMARTHRIA FASCICULATA (N.O. *Gramineæ*): Wet places; coast.

HEMLOCK. See CONIUM.

HEMP. See CANNABIS.

HEMP AGRIMONY. See EUPATORIUM.

HENBANE. See HYOSCYAMUS.

HENBIT. See LAMIUM.

HERACLEUM (N.O. *Umbelliferæ*): Cow-parsnip. Biennial, triennial, or perennial herbs, some of which are used medicinally and for food.

H. HUMILE: Lebanon, Hermon, etc.

HERNIARIA (N.O. *Paronychiaceæ*): Small annuals with oval, oblong, or linear leaves, and minute flowers in clusters.

H. CINERIA: Very common. Three other species.

HESPERIS (N.O. *Cruciferæ*): Rocket. Annual biennial or rarely perennial herbs somewhat resembling the stock. The flowers are purple, lilac, white, or yellow.

H. KOTSCHYANA: Lebanon, higher parts. Two other species.

HIBISCUS (N.O. *Malvaceæ*): Rose-mallow group. An extensive genus, mostly shrubs, with large, handsome flowers, borne singly upon stalks towards the end of the branches. A few of the species reach the height of small trees, and all possess the mucilaginous properties common to the order.

H. CANNABINUS and ESCULENTUS : Cultivated.

H. SYRIACUS : Doubtful if now found, except in Northern Syria. See Illustration XXXV.

H. TRIONEM : Bladder ketmia. Lower leaves round, others palmately parted. Calyx hairy; the petals yellow, with a purple spot at the base. General in summer.

HIERACIUM (N.O. *Compositæ*) : Hawkweed. An extensive and difficult genus of cichoraceous plants, mostly with yellow flowers. The name 'hawkweed' is derived from an ancient belief that birds of prey used the juice of these plants to improve their eyesight.

H. LIBANOTICUM (P.) : Rocks in Alpine Lebanon. Two other species and one variety.

HIPPOCREPIS (N.O. *Leguminosæ*) : Horseshoe vetch. Herbaceous or somewhat shrubby plants, with long jointed seed-vessels, each joint of which has some likeness to a horseshoe; pinnate leaves and yellow flowers.

H. BIFLORA : Central and southern districts. Four other species.

HIPPOMARATHRUM BOISSIERI (N.O. *Umbelliferæ*) : A perennial branched herb with yellow flowers. Common, except in the Ghor and Alpine regions.

HOLLY. See ILEX.

HOLLYHOCK. See ALTHÆA.

HOLOSTACHYS CASPICA (N.O. *Chenopodiaceæ*).

HOLOSTEUM (N.O. *Alsineæ*) : Small annuals with oblong leaves in pairs, and umbels of small chickweed-like flowers.

H. LINIFLORUM : In sandy fields.

H. UMBELLATUM : General in plains and hills.

HONEYSUCKLE. See LONICERA.

HONEY-WORT. See CERINTHE.

XXXV.—HIBISCUS SYRIACUS.

XXXVI.—HYOSCYAMUS NIGER : HENBANE.

To face page 104.

HORDEUM (N.O. *Gramineæ*) : Barley.

H. DISTICHUM : Cereal barley. Cultivated.

H. MURINUM : Barley-grass. Moab, etc. Three other species.

HOREHOUND. See MARRUBIUM.

HOREHOUND (BLACK). See BALLOTA.

HORNED POPPY. See GLAUCIUM.

HORN-OF-PLENTY GRASS. See CORNUCOPIA.

HORSESHOE VETCH. See HIPPOCREPIS.

HOUND'S-TONGUE. See CYNOGLOSSUM.

HUMULUS LUPULUS (N.O. *Urticaceæ*) : Hop. A perennial with long, rough, twining stems ; the stamens and pistils are on different plants ; the flowers containing the former are in drooping panicles, and the latter in cones or catkins, which, when fully grown, are the ' hops ' used by brewers. Anti-Lebanon, Galilee.

HUSSONIA (N.O. *Cruciferæ*) : Annual desert herbs resembling *Erucaria*, distinguished by slender contorted pods.

H. UNCATA : Desert south of Beersheba.

HUTCHINSIA PETRÆA (N.O. *Cruciferæ*) : A small annual with pinnate leaves and small white flowers. Bare hills, Moab.

HYACINTHUS ORIENTALIS (N.O. *Liliaceæ*) : This plant has a large bulb with fleshy linear leaves, and a loose spike of drooping blue flowers with bell-shaped perianth. It is the parent of the garden varieties. Lower slopes of Lebanon towards Sidon.

HYDROCOTYLA (N.O. *Umbelliferæ*) : Water pennywort. Perennial prostrate tender herbs, rooting at the joints.

H. NATANS : Ditches, Huleh.

HYMENOCARPUS (N.O. *Leguminosæ*): Annual herbs resembling *Medicago*.

H. CIRCINNATUS: Grassy plains everywhere.

HYOSCYAMUS (N.O. *Solanaceæ*): A genus specially characterized by its funnel-shaped corolla and by its fruit, which is enclosed in a persistent calyx, and consists of a capsule opening by means of a valve, like the lid of a tankard.

H. MUTICUS: Judæan wilderness.

H. NIGER: Henbane. Northern districts. See Illustration XXXVI. Five other species.

HYOSERIS SCABRA (N.O. *Compositæ*): This plant belongs to a genus of small annuals, resembling *Taraxacum*, with a single yellow flower-head. Littoral districts.

HYPECOUM (N.O. *Papaveraceæ*): Small annual herbs with smooth glaucous root-leaves; stem-leaves much divided; flowers yellow.

H. GRANDIFLORUM: Coast and hilly districts.

H. PROCUMBENS: Jordan Valley, wâdys in Gilead. Two other species.

HYPERICUM (N.O. *Hypericineæ*): A large genus of herbaceous or shrubby plants, with sepals and petals, each five in number. Some varieties have large dark green, almost evergreen, leaves.

H. HIRCINUM: Common in the north and on the coast.

H. PERFORATUM: St. John's wort. Coasts and mountain region.

H. SERPYLLIFOLIUM: Galilean hills among brushwood. Twelve other species and varieties.

HYPOCHÆRIS GLABRA (N.O. *Compositæ*): Cat's-ear. A herb belonging to the chicory tribe, with a feathery pappus. Littoral districts.

HYSSOP (of the Bible). See CAPPARIS.

HYSSOPUS OFFICINALIS (N.O. *Labiatæ*): Common hyssop. A small bushy herb with lanceolate leaves; formerly used in medicine.

I.

IBERIS (N.O. *Cruciferæ*): Candytuft. Annual plants or small undershrubs, with oblong or linear leaves, and flat corymbs of white, pink, or purple flowers.

I. ALEPPICA: Doubtful.

I. ODORATA: In the plains.

ICE-PLANT. See MESEMBRYANTHEMUM.

IFLOGA SPICATA (N.O. *Compositæ*): A small herbaceous plant resembling *Filago*. Sandy places, coast to Sinai.

ILEX: Holly. Shrubs with leathery, glossy, alternate leaves.

I. AQUIFOLIUM: Drupe, dark crimson. Amanus.

IMPARATA ARUNDINACEA (N.O. *Gramineæ*): A perennial herb with a long, silky, spiked panicle. Gennesaret.

INDIGOFERA (N.O. *Leguminosæ*): Indigo-plant. A tropical or subtropical genus of herbaceous plants or shrubs, with pinnate leaves; flowers in racemes, generally rose-purple, blue, or white; and a straight or curved pod. Indigo is mentioned as a dye by Pliny and by Dioscorides, and is supposed to have been used by the ancient Egyptians.

I. ARGENTEA, I. TINCTORIA: Cultivated for indigo on the east side of the Dead Sea and at Magdala.

I. PAUCIFOLIA: South end of Dead Sea.

INULA (N.O. *Compositæ*): Herbs sometimes shrubby at base, with yellow, many-flowered heads.

I. CRITHMOIDES: Golden samphire. Maritime rocks and marshes all round the Dead Sea.

I. GRAVEOLENS: On the coast.

I. VISCOSA: Common everywhere in mountains. Six other species.

IPHIONA (N.O. *Compositæ*): Bushy plants with stiff branches and prickly leaves.

I. JUNIPERIFOLIA : Callirrhoe to Sinai.

I. SCABRA : Wâdys south of Dead Sea.

IPOMÆA (N.O. *Convolvulaceæ*) : Morning glory. Twining smooth herbs, rarely shrubby, resembling *Convolvulus*, with simple lobed or divided leaves, and large handsome flowers in the axils of the leaves. The flowers are generally in small cymes, and are purple, white, pink, or pale blue in colour.

I. LITTORALIS : Maritime plains.

I. PALMATA : Plain of Gennesaret, etc. Extensively cultivated.

I. SAGITTATA.

IRIS (N.O. *Iridaceæ*) : An extensive and beautiful genus of perennial plants, with sword-shaped leaves, and flowers often large and handsome, with a six-parted perianth and a short tube.

I. FLORENTINA : Has large white flowers.

I. FŒTIDISSIMA : Fœtid iris or gladdon.

I. GERMANICA : Plains ; common.

I. HAYNEI (P.) : Mount Gilboa.

I. LORTETII (P.) : Dry thickets, Lebanon, 2,000 feet.

I. PALÆSTINA : Limb whitish-yellow, with pale lilac tinge ; flowers sweet-smelling. Universal.

I. PALLIDA : Galilee.

I. PERSICA : Flowers have a white ground flushed with azure-blue, purple, and yellow.

I. PSEUDO-ACORUS : Yellow flag. Wet places, coast, Huleh.

I. RETICULATA : A dwarf plant with dark violet flowers and a gold blotch. Bashan, Gilead, Galilee.

I. SISYRINCHIUM : Universally abundant in dry places.

I. TUBEROSA : Flowers green and black. Hilly districts.

I. VARTINI : Leaves four-sided with acute angles, and armed with horny points ; flowers lavender or pale blue. Galilee, near Nazareth. About seven other species. Parkinson laments that there are no 'vertues' known to belong to the iris. 'These kinds of *flower de luces* . . . serve only to deck up the gardens of the curious.'

ISATIS (N.O. *Cruciferæ*): Woad. Erect annual or perennial plants. The undivided leaves have a bluish bloom, the yellow flowers are in panicles, and produce flat, pendulous pods.

I. LATISILIQUA: Lebanon and Hermon.

I. TINCTORIA: Dyer's woad. Plain of Gennesaret. Six other species and one variety.

IXIOLIRION MONTANA (N.O. *Amaryllidaceæ*): A bulbous plant, with narrow, linear, glaucous leaves and erect blue or violet flowers, consisting of a six-parted perianth with lanceolate divisions. Hills and fields; local from Gaza to Lebanon.

J.

JASMINUM (N.O. *Jasminaceæ*): Jasmine. Shrubs or climbers, generally with pinnate leaves, and white or yellow flowers in terminal panicles.

J. FRUTICANS, J. SYRIACUM: Mount Hermon and surrounding district.

J. OFFICINALE: White jasmine. Beyrout.

JERUSALEM SAGE. See PHLOMIS.

JOHRENIA (N.O. *Umbelliferæ*): Biennials or perennials with yellow flowers and pinnatisect leaves.

J. DICHOTOMA: Middle zone of Lebanon, Anti-Lebanon, etc. Five other species.

JUGLANS REGIA (N.O. *Juglandaceæ*): Walnut. All the glens and lower slopes of Lebanon, and Hermon. Galilee, cultivated.

JUJUBE. See ZIZYPHUS.

JUNCUS EFFUSUS (N.O. *Juncaceæ*): Common rush.

J. ACUTUS: Great sea-rush.

J. GLAUCUS: Hard rush.

J. MARITIMUS: Lesser sea-rush.

J. LAMPROCARPUS: Jointed rush. Eight other species of *Juncus*.

JUNIPER. See JUNIPERUS.

JUNIPERUS EXCELSA (N.O. *Coniferæ*): Lebanon, etc.

J. COMMUNIS: Juniper. North Lebanon.

J. DRUPACEÆ: Lebanon and Anti-Lebanon; common.

J. FŒTIDISSIMA: Lebanon, Gilead. Four other species.

JURINEA STÆHELINÆ (P.) (N.O. *Compositæ*): A thistle-like plant, with sessile linear leaves and cylindrical heads. Interior plains, Alpine and Sub-alpine Lebanon, and Anti-Lebanon.

JUSSIÆA (N.O. *Onagrarieæ*): Herbs, or more rarely shrubs, growing in marshes or ponds throughout the tropics, with alternate leaves, and axillary yellow or rarely white flowers.

J. ANGUSTIFOLIA: Lake Huleh.

J. REPEUS: Upper Jordan Valley, Huleh, and Tiberias.

K.

KNAPWEED. See CENTAUREA.

KNAUTIA (N.O. *Dipsaceæ*): Perennial or annual herbs allied to *Scabiosa*, with a leafy involucre.

K. HYBRIDA: Field-scabious. Bluish-white flowers. Spring; fields and rocks; common.

KNOTWEED. See POLYGONUM.

KOCHIA (N.O. *Chenopodiaceæ*): Herbs or undershrubs, with sessile, linear, or cylindrical leaves and axillary flowers.

K. LATIFOLIA: Judæan wilderness and southern desert.

K. MONTICOLA: Barren places, Alpine Lebanon and Anti-Lebanon. Two other species.

KŒLERIA (N.O. *Gramineæ*) : Belongs to a genus of grasses of the *Festuca* tribe (fescue).

K. BERYTHEA (P.) : Phœnicia. Two other species.

KŒLPINIA LINEARIS (N.O. *Compositæ*).

KÖNIGA (N.O. *Cruciferæ*) : This genus is differentiated from *Alyssum* as *sweet alyssum.*

K. MARITIMA : Coast near Askelon. Two other species.

KUNDMANNIA (N.O. *Umbelliferæ*) : Perennial glabrous herbs with pinnatisect leaves and yellow flowers.

K. SYRIACA : In fissures of rocks.

KRUBERA (N.O. *Umbelliferæ*) : Annuals with minute white flowers.

K. PEREGRINA : Central Palestine, Samaria, etc.

L.

LACTUCA (N.O. *Compositæ*) : Lettuce.

L. CRETICA : Hill region of Southern, Central, and Eastern Palestine.

L. SCARIOLA : Prickly lettuce. General. Five other species.

'. . . For want of rest,
Lettuce and cowslip wine *probatum est.*'

LAGOËCIA (N.O. *Umbelliferæ*) : Annual herbs with simple globular, many-flowered umbels.

L. CUMINOIDES : General.

LAGOSERIS BIFIDA (N.O. *Compositæ*) : An annual herb resembling *Crepis.* Maritime region, Lebanon, southern desert, etc.

LAGURUS OVATUS (N.O. *Gramineæ*) : Hare's-tail grass. Galilee.

LALLEMANTIA (N.O. *Labiatæ*) : Annual or biennial herbs.

L. IBERICA : Corolla blue, rarely yellowish. Wilderness of Judæa, etc. Two other species.

LAMARCKIA AUREA (N.O. *Gramineæ*) : A pretty annual grass. Plains of Moab, Jericho, etc.

LAMIUM (N.O. *Labiatæ*) : Herbaceous plants, the corolla having two lips, of which the upper is arched, and the lower two-lobed and furnished with one or two teeth on each side.

L. AMPLEXICAULE : Henbit. Southern and Central Palestine, etc.

L. PURPUREUM : Red dead-nettle. On cultivated land everywhere. Nine other species and varieties.

LAPPA MAJOR (*Compositæ*) : Burdock. Unarmed herbs with many-flowered heads. Galilee, Lebanon.

LAPSANA (N.O. *Compositæ*) : Annual herbs with yellow flowers.

L. COMMUNIS.

L. PEDUNCULARIS : Alpine and Subalpine Lebanon and Anti-Lebanon.

LASERPITIUM GLABRUM (N.O. *Umbelliferæ*) : A perennial herb, the fruit having eight wing-like appendages.

LASIOPOGON (N.O. *Compositæ*) : Annual dwarf, woolly herbs.

L. MUSCOIDES : Wâdys about the Dead Sea.

LASIURUS HIRSUTUS (N.O. *Gramineæ*) : Southern desert.

LASTREA FILIX-MAS (N.O. *Filices*) : Male Fern.

L. RIGIDA (var. *Pallida*) : Rigid buckler-fern.

LATHYRUS (N.O. *Leguminosæ*) : Herbs, with weak stems, sometimes climbing, resembling the vetch. The leaves usually pinnate ; flowers solitary or in racemes—purple, red, blue, white, or bright yellow.

L. APHACA : Yellow pea. General.

L. OCHRUS : Maritime and central plains.

L. PRATENSIS : Meadow-pea. Fourteen other species.

LAURENTIA (N.O. *Lobeliaceæ*) : Dwarf herbs with tufted leaves, and axillary or racemose blue or pink flowers.

L. MICHELLII (var. *Integrifolia*) : Pale blue corolla.

L. TENELLA : Lower parts of Lebanon.

LAURISTINUS. See VIBURNUM TINUS.

LAURUS NOBILIS : Bay-tree. Carmel, Tabor, Gilead.

LAVANDULA (N.O. *Labiatæ*) : Lavender. Well-known undershrubs.

L. STÆCHAS : Universal except in mountain regions. Two other species.

LAVATERA (N.O. *Malvaceæ*) : Shrubby plants, 2 to 3 feet high, the leaves roundish and lobed, the flowers having an involucre and a five-lobed true calyx.

L. CRETICA : Plains, coast, and inland. Four other species.

LAWSONIA ALBA (N.O. *Lythraceæ*) : Henna. A dwarf shrub with smooth, pale green oval leaves; panicles of small white flowers, strongly scented; and fruit about the size of a pea. The pulverized leaves of the henna are used to make a cosmetic in the East; the men colour their beards with the orange-red dye thus obtained, and the Arabs the manes and tails of their horses. Engedi. General in cultivation.

LECOKIA CRETICA (N.O. *Umbelliferæ*) : A tall perennial herb with polygamous flowers. Open woods.

LEMNA MINOR (N.O. *Lemnaceæ*) : Duckweed. A small floating aquatic plant with almost imperceptible flowers. The ' green mantle of the standing pool.' General in ditches.

LEMON-GRASS. See ANDROPOGON.

LENTIL. See ERVUM.

LEONTICE (N.O. *Berberidaceæ*): Smooth herbaceous plants with tuberous roots, from which several variously-cut leaves spring annually, also stems, bearing smaller leaves and racemes of small yellow flowers, followed by bladder-like fruits.

L. LEONTOPETALUM: Lion's-leaf. The tuberous roots of this species are pounded and used at Aleppo instead of soap for washing woollens. They are sometimes called lion's-turnips. Coast and hills.

LEONTODON (N.O. *Compositæ*): A genus allied to *Taraxacum*, having a perennial root-stock, spreading toothed leaves, and yellow flowers.

L. ARABICUM (P.): Southern desert.

L. LIBANOTICUM (P.): Subalpine Lebanon. Three other species.

LEPIDIUM (N.O. *Cruciferæ*): Cress. Annual or perennial herbs with simple or variously-cut leaves, and numerous small white flowers in terminal racemes.

L. SATIVUM: Garden-cress. Cultivated, spontaneous on Mount Gilead. Seven other species.

LEPTADENIA PYROTECHNICA (N.O. *Asclepiadaceæ*): A leafless shrub, with tuberous trunk and clusters of almost sessile white flowers. Deserts about the Dead Sea.

LETTUCE. See LACTUCA.

LEYSSERA CAPILLIFOLIA (N.O. *Compositæ*): A dwarf desert-herb with linear leaves and a small yellow oblong flower-head. South end of the Dead Sea to Sinai.

LILIUM (N.O. *Liliaceæ*): Herbs with scaly bulbs, alternate or whorled leaves, slender stems, and large flowers.

L. CANDIDUM: White lily. Lebanon. Rare.

L. CHALCEDONICUM: Scarlet martagon lily. Rare.

LILYWORT. See ORNITHOGALLUM.

LIMONIASTRUM (N.O. *Plumbaginaceæ*) : Small shrubs with fleshy leaves, and three-bracted spikelets of flowers.

L. MONOPETALUM : Glaucous; corolla pink. Coast.

LINARIA (N.O. *Scrophulariaceæ*) : Toad-flax. Herbaceous plants the corolla of which is spurred at the base.

L. ARVENSIS = L. SIMPLEX : Yellow toad-flax. General.

L. DAMASCENA (P.) : Jebel-el-Assouad.

L. FLORIBUNDA : Southern desert; Ghor. Seventeen other species and varieties.

LINUM (N.O. *Lineæ*) : Flax. Herbs and small shrubs, with alternate, opposite, or whorled leaves. The flowers are variable in colour and very evanescent, and grow in panicles or corymbs.

L. CORYMBULOSUM : Mount Carmel.

L. PUBESCENS : Flowers pink. General.

L. SYRIACUM : Galilee, on limestone rocks.

L. USITISSIMUM : Common flax. Flowers blue. Near Damascus; cultivated everywhere. Ten other species.

LION'S LEAF and TURNIPS. See LEONTICE.

LIPPIA (N.O. *Verbenaceæ*) : Herbs or shrubs generally having glands containing an aromatic oil, simple opposite leaves, and small flowers in heads or spikes.

L. NODIFLORA : Esdraelon and maritime plains.

LIQUIDAMBAR ORIENTALIS (N.O. *Saxifragaceæ*) : An Indian tree with compound leaves and flowers in catkins. On warm hillsides; probably introduced.

LIQUORICE. See GLYCYRRHIZA.

LISÆA (N.O. *Umbelliferæ*) : Annual white-flowered herbs.

L. HETEROCARPA (var. *Syriaca*) : Central districts, Samaria, etc.

LITHOSPERMUM (N.O. *Boraginaceæ*): Gromwell. Rough hairy herbs or undershrubs, with racemes of purple, blue, white, or yellow flowers; the corolla funnel-shaped or salver-shaped.

L. ARVENSE: Corn gromwell. Universal from coast to Moab Desert. Four other species.

LLOYDIA (N.O. *Liliaceæ*): A liliaceous plant 5 to 6 inches high, with white flowers veined with red or green, the flower-stalk covered with a sheath.

L. GRÆCA: Phœnicia. One other species.

LOLIUM (N.O. *Gramineæ*): Rye-grass.

L. PERENNE: Perennial rye-grass. Gorge of Callirrhoe.

L. TEMULENTUM: Darnel ('tares'). One other species.

LOMARIA SPICANT (N.O. *Filices*): Blechnum or hard fern. Lebanon.

LONICERA (N.O. *Caprifoliaceæ*): Honeysuckle. Climbing or upright shrubs inhabiting both hemispheres.

L. ETRUSCA: Italian honeysuckle. Through the hill districts east and west of Jordan; from Hebron to Lebanon.

L. CAPRIFOLIUM: Lebanon. Two other species and one variety.

LOOSESTRIFE. See LYSIMACHIA and LYTHRUM.

LORANTHUS ACACIA (N.O. *Loranthaceæ*): West Indian mistletoe. A scarlet parasite of great beauty on *Zizyphus* and *Acacia*. Jordan Valley, Moab, Hebron.

LOTONONIS DICHOTOMA (N.O. *Leguminosæ*): A herb or shrub with digitate trefoil leaves and minute flowers. Southern desert; shores of Dead Sea. Var. *Persica*: Sinai.

LOTUS (N.O. *Leguminosæ*): A genus of herbaceous plants known by the leaves consisting of five leaflets, of which two are close to the stem. The flowers, either solitary or in little umbels, are yellow, red, or deep purple.

L. CARMELI (P.): Mount Carmel.

L. CORNICULATUS (var. *Alpinus*): Bird's-foot trefoil. Yellow flowers.

L. CRETICUS: Sandy coasts; Moab. Fifteen other species and varieties.

LUPINUS (N.O. *Leguminosæ*): Lupine. Herbs or undershrubs with leaves consisting of five or more digitate leaflets; and blue, white, purple, or yellow flowers in terminal racemes or spikes.

L. DIGITATUS: Cultivated.

L. PALÆSTINUS (P.): Southern plains near Gaza, etc.

L. PILOSUS: This species has dark blue and white flowers In the north, and Jordan Valley. Four other species and one variety.

LYCIUM (N.O. *Solanaceæ*): Matrimony vine. Thorny shrubs with varying inflorescence. The corolla is tubular or funnel-shaped, and the fruit succulent in the cup-like calyx.

L. ARABICUM: Round the Dead Sea.

L. EUROPÆUM: Box-thorn. In warm plains and Upper Jordan Valley.

LYCOPUS (N.O. *Labiatæ*): A genus of herbs of which the bell-shaped corolla is scarcely longer than the calyx.

L. EUROPÆUS: Gipsy-wort. In the north, by ditches.

LYGIA (N.O. *Thymelaceæ*): Herbs or shrubs with inconspicuous flowers.

L. ANCHERI: Perennial.

L. PASSERINA: Annual. One other species.

LYME-GRASS. See ELYMUS.

LYSIMACHIA (N.O. *Primulaceæ*): Loosestrife. Perennial or annual herbs allied to *Anagallis*.

L. DUBIA: Leaves alternate; corolla whitish-red. Coast; Ghor-es-Safieh, etc.

LYTHRUM (N.O. *Lythraceæ*): Annual or perennial herbs with opposite or alternate leaves; the purple flowers axillary or in spiked whorls.

L. SALICARIA (var. *Syriacum*): Purple loosestrife. Northern valleys. Three other species and one variety.

M.

MADDER. See RUBIA.

MADWORT. See ASPERUGO.

MAIDEN-HAIR FERN. See ADIANTUM.

MALABAILA SCHAKUL (N.O. *Umbelliferæ*): A perennial yellow-flowered herb with non-radiating flowers. Shrubby hills and fields throughout. Var. *Platycarpa:* Lebanon.

MALACHIUM (N.O. *Alsineæ*): A perennial herb resembling chickweed.

M. AQUATICUM: Leaves oblong, cyme loose. Moist places, Central Palestine.

MALCOLMIA (N.O. *Cruciferæ*): Herbaceous plants, generally annuals, with toothed leaves, purple or white flowers in racemes, and a round pod.

M. MARITIMA: Virginian stock. On the coast.

M. PULCHELLA: Universal in the plains. Ten other species and varieties.

MALE FERN. See LASTREA.

MALLOW. See ALTHÆA and MALVA.

MALVA (N.O. *Malvaceæ*): Mallow. Annual or perennial herbs or shrubs, all possessing tough fibre and an abundance of mucilage.

M. ROTUNDIFOLIA: An annual with lobed leaves and pale blue flowers. Fields in the north, Moab.

M. SYLVESTRIS: Wood-mallow. A biennial with roundish leaves and rose-coloured flowers. Fields and waste places; Plain of Sharon, etc. Var. *Oxyloba* (P.): Jordan Valley, etc. Two other species.

MALVELLA SHERARDIANA (N.O. *Malvaceæ*): A woolly perennial prostrate herb resembling *Malva*, with pink flowers. General.

MANDRAGORA (N.O. *Solanaceæ*): A short-stemmed herb with a fleshy root and flower-stalk bearing a solitary flower with bell-shaped corolla springing from among the leaves.

M. OFFICINARUM: Mandrake.

> 'And shrieks like mandrakes torn out of the earth,
> That living mortals hearing them run mad.'
>
> *Romeo and Juliet.*

In all plains, valleys, Jordan basin, etc.

M. AUTUMNALIS: Doubtful.

MARJORAM. See ORIGANUM.

MARRUBIUM (N.O. *Labiatæ*): Herbs with a bitter juice.

M. LIBANOTICUM: P. Lebanon, among the cedars.

M. VULGARE. Horehound. Has an erect stem covered with white hair, round leaves, and white flowers.

> 'Here horehound gaynst the mad dog's ill
> By biting, never failing.'
>
> *Michael Drayton.*

Four other species.

MARSH ARROW-GRASS. See TRIGLOCLIN.

MARSH-MALLOW. See ALTHÆA.

MATRICARIA CHAMOMILLA (N.O. *Compositæ*): Wild-chamomile. Near Banias.

M. AUREA: Universal. Lebanon to Dead Sea.

MATRIMONY VINE. See LYCIUM.

MATTHIOLA (N.O. *Cruciferæ*): Woolly herbs with pink, purple, yellow, or livid flowers. One British species, *M. incana*, is the origin of all the Brompton stocks.

M. ARABICA : In the eastern desert.

M. LIVIDA (P.) : Barren plains in Moab, etc.

M. SINUATA : Sea-stock. Rocks near the coast. Seven other species.

MATTIA SCHLUMBERGERI (N.O. *Boraginaceæ*) : A white hairy herb with linear leaves and umbellate blue or yellow flowers : Lebanon.

MEADOW-GRASS. See POA.

MEADOW-PEA. See LATHYRUS.

MEADOW-SAFFRON. See COLCHICUM.

MEDICAGO (N.O. *Leguminosæ*) : Medick. Herbs with pinnately trefoil leaves and a more or less spirally twisted pod.

M. GALILÆA : Hills and central plains.

M. LUPULINA : Black medick. Lebanon, etc.

M. MARINA : Maritime plains.

M. SATIVA : Lucerne or purple medick. Generally cultivated. Twenty other species and varieties.

MEDITERRANEAN HEATH. See ERICA.

MELANDRIUM (N.O. *Sileneæ*) : Perennial herbs resembling *Silene*.

M. ERIOCALYCINUM : Lebanon, to the summit.

M. PRATENSE : Lebanon up to 5,000 feet.

MELIA AZEDARACH (N.O. *Meliaceæ*) : The pride-of-India, bead-tree, holy-tree, false sycamore. A tree from 30 to 50 feet high, with bipinnate leaves and lilac, fragrant flowers. Cultivated.

MELICA (N.O. *Gramineæ*) : A genus of grasses with inflorescence in panicles or racemes.

M. ANGUSTIFOLIA : Lower Lebanon. Five other species.

MELILOTUS (N.O. *Leguminosæ*) : Sweet-clover, melilot. Herbs sometimes shrubby, with pinnately trefoil leaves and spiked or racemed flowers.

M. OFFICINALIS : Flowers yellow to white.

M. SULCATA : Fields ; common. Seven other species and varieties.

MELISSA OFFICINALIS (N.O. *Labiatæ*) : Common balm. A herb with a two-lipped calyx, and a somewhat inflated corolla. Littoral and lower mountain districts.

MELON. See CUCUMIS.

MENTHA (N.O. *Labiatæ*) : Mint. Perennial herbs with whorled flowers.

M. AQUATICA : In water ; Esdraelon.

M. PULEGIUM : Pennyroyal. Wet places, littoral district.

M. SYLVESTRIS : Horse-mint. Corolla lilac. Common even to Alpine regions. Four other varieties.

MERCURIALIS (N.O. *Euphorbiaceæ*) : Mercury. Herbaceous plants, with opposite leaves and a two-seeded capsule.

M. ANNUA : Annual mercury. Common everywhere.

MERECARPÆA VAILLANTIOIDES (N.O. *Rubiaceæ*) : An annual dwarf herb with minute yellow flowers. Hauran to Damascus.

MERENDERA (N.O. *Colchicaceæ*) : Bulbous plants resembling *Crocus*, with pink flowers, which appear above the ground in autumn ; the leaves and ovary are then underground, and are mature in spring when the flowers fade.

M. CAUCASICA : Snow-line of Lebanon.

M. SOBOLIFERA : Northern plains.

MESEMBRYANTHEMUM (N.O. *Ficoideæ*) : Annual succulent herbs, the fleshy leaves very variable in form, the flowers often handsome.

M. CRYSTALLINUM : Ice-plant. Near Askelon.

M. FORSKAHLEI : South end of Dead Sea.

M. NODIFLORUM : Mount Carmel.

MESPILUS GERMANICA (N.O. *Rosaceæ*): Medlar. About Nablus and Samaria; probably introduced.

MICHAUXIA (N.O. *Campanulaceæ*): A genus of bell-worts. Tall biennial herbs with showy white flowers.

M. CAMPANULOIDES: Litany Valley.

MICROMERIA (N.O. *Labiatæ*): Perennial herbs or shrubs.

M. NERVOSA: Sessile leaves and pink flowers. Littoral and hill districts on both sides of the Jordan. Five other species and one variety.

MICROPUS (N.O. *Compositæ*): Annual, more or less woolly herbs.

M. LONGIFOLIUS: Anti-Lebanon to Damascus. Three other species.

MILIUM SYRIACUM (N.O. *Gramineæ*): A grass with inflorescence in loose panicles. One other species.

MILK-THISTLE. See SILYBUM.

MILLET. See PANICUM.

MINT. See MENTHA.

MISTLETOE. See VISCUM and LORANTHUS.

MOLTKIA (N.O. *Boraginaceæ*): Shrubs with showy corymbs of blue flowers.

M. CÆRULEA: Hillsides and waste places. Antioch to Palmyra, etc.

MOLUCCELLA (N.O. *Labiatæ*): An annual plant with a somewhat bell-shaped calyx.

M. LÆVIS: Northern plains, etc.

M. SPINOSA: Coast and southern hills, base of Hermon.

MOLY: An old name for several species of *Allium*.

'Sweet is moly, but his root is ill.'

Spenser.

MOMORDICA BALSAMINA (N.O. *Cucurbitaceæ*): A climbing herb with yellow flowers, and broadly-ovate orange or red fruit. Nooks by east shore of Dead Sea.

MONSONIA (N.O. *Geraniaceæ*): Annual or perennial herbs resembling *Erodium*. Flowers flesh-coloured.

M. NIVEA: Desert south of Gaza.

MORETTIA CANESCENS (N.O. *Cruciferæ*): A herb with grey hairy leaves and erect racemes of flowers. Desert east of Gilead.

MORICANDIA (N.O. *Cruciferæ*): Glabrous herbs with large pinkish-purple flowers.

M. ARVENSIS.

M. DUMOSA: Southern desert.

M. SINAICA: Wâdys south and south-west of Dead Sea.

MORINA PERSICA (N.O. *Dipsaceæ*): A perennial herb with thistle-like leaves and pink flowers in dense whorls. Lower and Subalpine Lebanon and Anti-Lebanon.

MORINGA (N.O. *Moringaceæ*): Tropical shrubs or small trees with compound leaves and irregular flowers.

M. APTERA: An aromatic oil is prepared from the seeds of this species. Hot valleys about the Dead Sea.

MORUS NIGRA (N.O. *Moraceæ*): Black mulberry. Cultivated everywhere.

M. ALBA: White mulberry. Cultivated everywhere, especially on Lebanon and Anti-Lebanon.

MOUNTAIN-SORREL. See OXYRIA.

MULGEDIUM PLUMIERI (N.O. *Compositæ*): Blue-flowered genus of *Sonchus* (sow-thistle).

MULLEIN. See VERBASCUM.

MUSCARI (N.O. *Liliaceæ*): Bulbous plants with narrow leaves and flowers in racemes at the end of a simple stalk. The blue perianth is tubular.

M. COMOSUM : In cultivated land ; frequent.

M. PINARDI : Lebanon, Anti-Lebanon, Phœnicia.

M. RACEMOSUM : Grape-hyacinth. Among rocks in hill districts, etc. Six other species.

MYOSOTIS (N.O. *Boraginaceæ*) : Forget-me-not. Perennial herbs with small blue or white flowers.

M. HISPIDA : Galilee, Lebanon.

M. PALUSTRIS : Haifa.

M. REFRACTA : Subalpine and Alpine Lebanon, and Anti-Lebanon.

M. STRICTA : North Palestine and mountains.

MYOSURUS MINIMUS (N.O. *Ranunculaceæ*) : Mouse-tail. A small annual herb with undivided leaves, all clustered at the root, and a one-flowered scape. Anti-Lebanon, Moab.

MYRIOPHYLLUM SPICATUM (N.O. *Halorageæ*) : Water-milfoil. An aquatic herb with whorls of flowers in terminal spikes. Jordan Valley, etc.

MYRTUS COMMUNIS (N.O. *Myrtaceæ*) : Myrtle. A well-known evergreen aromatic shrub with white flowers. The fruits, which have a sweet and aromatic taste, are edible, either fresh or dried as a condiment. General; chiefly in maritime and mountain districts.

N.

NAJAS GRAMINEA (N.O. *Naiadaceæ*) : Little branching herbs growing under water. Ditches ; Plain of Sharon.

NARCISSUS (N.O. *Amaryllidaceæ*) : Bulbous plants with linear leaves ; root-scapes bearing one or many flowers, often nodding ; a perianth with a slender tube and short cup.

N. TAZETTA : Cultivated land and lower hills from Gaza to Lebanon.

N. TAZETTA (var. *Syriacus*): Phœnician Plain, Anti-Lebanon.

NARDURUS ORIENTALIS (N.O. *Gramineæ*): A tufted annual grass. The Bukâá.

NASTURTIOPSIS ARABICA (N.O. *Cruciferæ*): Annuals with yellow flowers resembling *Nasturtium*. Southern desert of Judæa.

NASTURTIUM (N.O. *Cruciferæ*): Dwarf plants of a creeping habit. 'The genus is said to have derived its name from the effect its acrimony produces on the muscles of the nose—*nasus tortus*, signifying a convulsed nose.'

N. OFFICINALE: Watercress. General. Three other species.

NEPETA (N.O. *Labiatæ*): Perennial herbs, the corolla having the upper lip straight and notched, the lower usually three-cleft.

N. CATARIA: Catmint. Lebanon.

N. ORIENTALIS: Lebanon. Nine other species and one variety.

NEPHELOCHLOA TRIPOLITANA (N.O. *Gramineæ*): Coast near Beyrout.

NERIUM (N.O. *Apocynaceæ*): A genus of dog-banes. Leaves narrow and long, with parallel veins; corolla salver-shaped.

N. OLEANDER: Oleander. Bright pink flowers. Jordan Valley, and banks of all streams flowing into it, east and west.

NESLIA PANICULATA (N.O. *Cruciferæ*): An annual hairy herb, with oblong leaves and small yellow flowers. Common in fields.

NETTLE. See URTICA.

NETTLE-TREE. See CELTIS.

NICOTIANA TABACUM (N.O. *Solanaceæ*): Tobacco. Cultivated.

NIGELLA (N.O. *Ranunculaceæ*): Fennel-flower. Erect annuals with finely-cut leaves, and solitary terminal blue or whitish flowers.

N. DAMASCENA: Love-in-a-mist. In fields.

N. ORIENTALIS: Mount Tabor, Moab.

N. SATIVA: 'Fitches.' Cultivated. Five other species.

NIGHTSHADE. See SOLANUM.

NITRARIA (N.O. *Zygophylleæ*): A genus generally consisting of thorny shrubs, with fleshy leaves and solitary or clustered white flowers. They are natives of salt plains in Central Asia and Northern Africa.

N. TRIDENTATA: This species has been supposed to be the true lotus-tree of the ancients. Wâdys south and south-east of Dead Sea.

NŒA SPINOSISSIMA (N.O. *Chenopodiaceæ*): A shrub with alternate leaves and solitary flowers in axils. Alpine and Subalpine Lebanon.

NONNEA (N.O. *Boraginaceæ*): Prostrate or ascending herbs.

N. PHILISTÆA (P.): Has oblong leaves and pale orange flowers. Plain of Philistia. Three other species.

NOTHOCHLÆNA LANUGINOSA (N.O. *Filices*): A fern resembling *Polypodium*. Moab, in deep glens.

NOTOBASIS SYRIACA (N.O. *Compositæ*): The Syrian thistle. A large and powerful thistle, with white-veined leaves, and sessile flower-heads with purple florets and spiny bracts. General except in mountains.

NOTOCERAS CANARIENSE (N.O. *Cruciferæ*): Small annuals with racemes of small yellowish flowers opposite the leaves. Jericho.

NUPHAR LUTEUM (N.O. *Nymphæaceæ*): Yellow water-lily. Lake Huleh.

NYMPHÆA ALBA (N.O. *Nymphæaceæ*): White water-lily. Water-plants with tuberous root-stock, sending down rootlets into the mud, and throwing up leaves and flowers. In still water, especially Lake Huleh.

O.

OAK. See QUERCUS.

OCHRADENUS BACCATUS (N.O. *Resedaceæ*): A small tropical shrub, with linear leaves and spicate yellow flowers, succeeded by a berry. Round the Dead Sea.

OCHTHODIUM ÆGYPTIACUM (N.O. *Cruciferæ*): An annual branching herb with yellow flowers. Common in fields.

OCYMUM (N.O. *Labiatæ*): Strongly scented annual or perennial herbs, or small shrubby plants, with whorls of flowers.

O. BASILICUM.

ODONTITIS (N.O. *Scrophulariaceæ*): Annual or shrubby perennial herbs with linear leaves.

O. ANCHERI: Flowers red. Lebanon.

O. SEROTINA: General.

ŒNANTHE (N.O. *Umbelliferæ*): Tall plants resembling the parsnip.

Œ. MEDIA: Lake Huleh, etc.

Œ. PROLIFERA: General in moist plains.

OIL-TREE. See ELÆAGNUS.

OLDENLANDIA (N.O. *Rubiaceæ*): Low herbaceous or rarely erect shrubby plants, with opposite leaves and small flowers. The roots of some of the species yield a red dye.

O. CAPENSIS: Mouth of Nahr-el-Kelb, Beyrout.

OLEA (N.O. *Oleaceæ*): A genus containing trees from 20 to 30 feet high, and also large shrubs. All have leathery green leaves, small whitish, often fragrant, flowers, and an oily drupe.

O. EUROPÆA: The olive. Universally cultivated, except in the Jordan Valley and mountain region.

OLEANDER. See NERIUM.

OLEASTER. See ELÆAGNUS.

OLIGOMERIS SUBULATA (N.O. *Resedaceæ*): An annual herb with simple leaves and minute flowers in slender spiked racemes. Southern desert.

OLIVE. See OLEA.

ONOBRYCHIS (N.O. *Leguminosæ*): A papilionaceous genus with pinnate leaves, spicate flowers, and a one-seeded pod.

O. CRISTA-GALLI: Southern wilderness, etc.

O. PTOLEMAICA: South end of Dead Sea.

O. SATIVA: Sainfoin. Cultivated. Eleven other species.

ONONIS (N.O. *Leguminosæ*): An extensive genus of which most of the species are undershrubs, with trifoliate or simple leaves, and flowers solitary or in racemes, pink, purple, or yellow in colour.

O. ANTIQUORUM: Rest-harrow. Pink flowers. Ghor; east side of the Jordan.

O. BIFLORA: Crest of Mount Gilead.

O. NATRIX: Yellow flowers. Galilee, Lebanon, etc.

O. NATRIX (var. *Tomentosa*): About Jerusalem, etc.

O. NATRIX (var. *Stenophylla*): On the maritime plains. Sixteen or more species and varieties.

ONOPORDON (N.O. *Compositæ*): A genus of spinous herbaceous thistles.

O. ILLYRICUM (var. *Libanoticum*): Littoral Lebanon and Anti-Lebanon, Moab. Five other species.

ONOSMA (N.O. *Boraginaceæ*): Scabrous undershrubs covered with stiff white hairs, with linear leaves and terminal racemes of yellow or purple flowers.

O. ALEPPICUM: Wilderness of Judæa; northern desert plains.

O. CÆRULESCENS (P.): Round Anti-Lebanon.

O. ECHIOIDES: Galilean and Moabite hills. Thirteen other species and varieties.

OPHIOGLOSSUM (N.O. *Filices*): Adder's-tongue fern.

OPHRYS (N.O. *Orchideæ*): A genus of terrestrial orchids, of which the flowers have no spur, and the lip resembles the body of a bee or other insect.

O. ARACHNITIS: Spider orchis. Lebanon, Phœnicia, etc.

O. LUTEA: Common on dry hills east and west. Eight other species.

OPOPONAX (N.O. *Umbelliferæ*): A plant resembling parsnip.

O. CHIRONIUM: Grows 6 or 7 feet high, and has bipinnate leaves and yellow flowers.

O. ORIENTALE: On the plains.

OPUNTIA VULGARIS (N.O. *Cactaceæ*): Cactus opuntia, prickly pear. A genus with jointed stems and branches, the joints thick and flat. The true leaves, which are very small and fleshy, soon drop off; the flowers are yellow, and the fruit pear- or egg-shaped. All over the lower country; naturalized.

O. COCHINELLIFERA: Cochineal cactus. Also naturalized, especially on Mount Ebal, in Samaria.

ORCHIS (N.O. *Orchideæ*): A genus of terrestrial orchids. Perennial plants of which the root-stock produces each year a new fleshy tubercle. The flower-spikes are usually purple or red, the sepals and petals five.

O. MACULATA: Spotted orchis. Lebanon, in open places.

O. MORIO: Green-winged orchis. Lebanon and Phœnician Plain.

O. PAPILIONACEA: Butterfly orchis. Moist places, central Palestine.

O. SANCTA: Galilee, Tabor, Hermon.

O. SIMIA: Monkey orchis. Hill and mountain districts. Twenty other species and varieties.

ORIGANUM (*Labiatæ*): Herbs or low shrubs with flowers in round or oblong spikes.

O. LIBANOTICUM (P.): Lebanon.

O. VULGARE: Wild-marjoram. One to two feet high, with ovate leaves and purple or white flowers in round heads at the end of the branches. Eight other species and varieties.

ORLAYA (N.O. *Umbelliferæ*): Annual herbs with white flowers.

O. GRANDIFLORA: Moab. Two other species.

ORMENIS MIXTA (N.O. *Compositæ*): A plant strongly resembling chamomile. In fields and on all the plains.

ORNITHOGALUM (N.O. *Liliaceæ*): Lily-worts. A genus of bulbous plants, allied to *Scilla*, with star-like greenish-white or yellow flowers. The bulbs of *O. umbellatum* are cooked and eaten in Palestine, 'being sweeter in taste than any chestnut, and serving as well for a necessary food as for delight' (Parkinson).

O. ARABICUM: The Ghor.

O. LIBANOTICUM (P.): Subalpine Lebanon.

O. UMBELLATUM: Star-of-Bethlehem. Universally abundant. Nine other species.

ORNITHOPUS (N.O. *Leguminosæ*): An annual herb which derives its name from one species, the jointed pod of which resembles a bird's claw.

O. COMPRESSUS: Coast and hill districts.

OROBANCHE (N.O. *Orobanchaceæ*): Curious-looking parasitic plants growing on the roots of clover, flax, hemp, etc. All have a dingy yellow stem, leafless, but covered with scales; and rather large flowers at the top of the stem—yellow, pink, or purple.

O. PALÆSTINA: Jerusalem, Gerizim, etc. On *Anthriscus*, etc.

O. PUBESCENS: On *Compositæ*. General. Six other species.

OROBUS (N.O. *Leguminosæ*): A genus generally united with *Lathyrus*.

O. HIRSUTUS: Rough pea. Hilly districts near coast. Three other species.

ORYZA SATIVA (N.O. *Gramineæ*): The rice-plant. Cultivated.

OSMUNDA REGALIS (N.O. *Filices*): Royal flowering fern. Banks of the Leontes; Upper Jordan.

OSYRIS (N.O. *Santalaceæ*): Small trees or shrubs with alternate or rarely opposite leaves.

O. ALBA: Gilead, Moab, Galilee.

OTOSTEGIA (N.O. *Labiatæ*): A genus of shrubs, not spiny.

O. SCHIMPERI: This species has woolly ovate leaves, and two- to three-flowered whorls. Wâdy Zuweirah.

OXALIS (N.O. *Oxalidaceæ*): Wood-sorrel. Herbs, or more rarely shrubs; the leaves of most of the species consist of three leaflets, usually inversely heart-shaped.

O. CORNICULATA: In cultivated plains in the south.

OX-TONGUE. See HELMINTHIA.

OXYRIA DIGYNA (N.O. *Polygonaceæ*): Mountain sorrel. A small acid Alpine plant. Lebanon.

OXYSTELMA (N.O. *Asclepiadaceæ*): Climbing glabrous shrubs, with narrow linear leaves and racemose purplish flowers.

O. ALPINI: Southern Ghor.

P.

PÆONIA (N.O. *Ranunculaceæ*): Peony. Handsome herbaceous plants.

P. CORALLINA: Rare in North Lebanon.

PALIURUS ACULEATUS (N.O. *Rhamnaceæ*): Christ's-thorn. A shrub with alternate simple three-nerved leaves, small yellow flowers, and a seed resembling a head with a hat on. Covers the rocky hills all over the country. See p. 19.

PALLENIS SPINOSA (N.O. *Compositæ*): A herb resembling *Asteriscus*. Cultivated land; general.

PANCRATIUM (N.O. *Amaryllidaceæ*): Bulbous plants with deciduous or persistent leaves, and an umbel of white flowers terminating a solid scape.

P. MARITIMUM: Sands by Gaza.

P. PARVIFLORUM: Rocks and walls, Beyrout and Sidon.

P. SICKENBERGERI: Desert near Sebbeh.

PANICUM TURGIDUM (N.O. *Gramineæ*): A grass with spikelets consisting of two flowers. Wâdy Zuweirah.

P. MILIACEUM: Millet. Cultivated; a native of India. Introduced in ancient times. Seven other species and varieties.

PAPAVER (N.O. *Papaveraceæ*): Poppy. Well-known herbs with a milky juice, fibrous roots, leaves generally lobed or toothed, and single flowers.

P. LIBANOTICUM (P.): Lebanon and Hermon.

P. RHÆAS: Field-poppy. On the coast and Dead Sea shore.

P. SYRIACUM (P.): Plain of Tyre.

P. UMBONATUM (P.): Rocky plains of Southern Lebanon. Four other species. See p. 3.

PAPYRUS ANTIQUORUM, or *Cyperus Papyrus* (N.O. *Cyperaceæ*): Paper-reed. The underground root-stock of this reed throws up stems 8 to 10 feet high. The inflorescence is in many-flowered spikelets. North-east corner of Gennesaret, many acres north of Lake Huleh; swamp in plain of Sharon.

PARACARYUM (N.O. *Boraginaceæ*) : Herbs resembling *Cynoglossum*.

P. MYOSOTIOIDES : Violet-blue flowers. Alpine Lebanon, and Hermon. One other species.

PARIETARIA (N.O. *Urticaceæ*) : Herbaceous perennials.

P. JUDAICA : General.

P. OFFICINALIS : Wall-pellitory. A bushy plant about a foot high, with reddish brittle stems, ovate leaves, and small greenish flowers. Waste places and walls, Sidon, etc. Three other species.

PARONYCHIA (N.O. *Paronychiaceæ*) : Small perennials (rarely annuals), with opposite or whorled leaves, and heads of small flowers, often hidden by large bracts.

P. SINAICA (var. *Flavescens*) : Southern desert, near Beersheba. Two other species.

PARSLEY. See PETROSELINUM.

PARSLEY PIERT. See ALCHEMILLA.

PASTINACA (N.O. *Umbelliferæ*) : Genus containing the parsnip.

P. TERETIUSCULA : Lebanon.

PEGANUM HARMALA (N.O. *Zygophyllaceæ*) : Syrian rue. A powerfully scented herb, with alternate leaves, and flower-stalks bearing a terminal white flower with greenish nerves. By the shores of Dead Sea. See Illustration XXXVII.

PELLITORY (WALL). See PARIETARIA.

PELTARIA (N.O. *Cruciferæ*) : Erect perennials with numerous racemes of small white flowers.

P. ANGUSTIFOLIA : Lebanon and Hermon.

PENNISETUM CENCHROIDES (N.O. *Gramineæ*) : Belonging to a genus of grasses. Moab, Wâdy Zuweirah. Four other species.

PENNYCRESS. See THLASPI.

PENNYROYAL. See MENTHA.

PENNYWORT. See UMBILICUS.

PERIPLOCA (N.O. *Asclepiadaceæ*): Climbing shrubs with brownish green or yellow flowers.

P. GRÆCA: A tall shrub, climbing by the twining of the stem, with rich, dark, velvety, brownish-green flowers. Galilee, etc.

P. LÆVIGATA: Has yellow flowers. Northern coast.

PERIWINKLE. See VINCA.

PETROSELINUM SATIVUM (N.O. *Umbelliferæ*): Parsley. Lebanon.

PEUCEDANUM DEPAUPERATUM (N.O. *Umbelliferæ*) (var. *Alpinum*): Smooth perennial herbs. District round Lebanon and Hermon.

PHÆPAPPUS (N.O. *Compositæ*): Herbs with habit of *Centaurea*; yellow flowerets.

P. LIBANOTICUS: Has linear leaves. Lebanon and Hermon.

PHAGNALON (N.O. *Compositæ*): Herbs woody at base, with solitary flower-heads.

P. KOTSCHYI: Lebanon.

P. RUPESTRE: Jerusalem, central hills, etc.

PHALARIS ARUNDINACEA (N.O. *Gramineæ*): Reed-grass.

P. CANARIENSIS: Canary-grass. Five other species.

PHELIPÆA (N.O. *Orobanchaceæ*): Broomrape. Parasitical herbs resembling *Orobanche*.

P. CÆRULEA: Blue broom rape. Carmel, Lebanon, etc.

P. LIBANOTICA: Lebanon.

P. RAMOSA: Yellow stems, simple or branched; corolla yellow or violet. On *Leguminosæ*. General; Lebanon, Gilead, etc. Nine other species and varieties.

PHILLYRHÆA (N.O. *Oleaceæ*): Shrubs with small evergreen leaves.

P. ANGUSTIFOLIA:

P. MEDIA (var. *Latifolia*): Flowers clustered in axils; drupe globular. Carmel, Tabor, Lower Lebanon.

XXXVII.—PEGANUM HARMALA: SYRIAN RUE.

XXXVIII.—PHLOMIS FRUTICOSA: JERUSALEM SAGE.

To face page 134.

PHLEUM (N.O. *Gramineæ*) : Cat's-tail grass. A genus of grasses.

P. SCHÆNOIDES : On the coast. Two other species.

PHLOMIS (N.O. *Labiatæ*) : Jerusalem sage. Herbs and shrubs generally woolly or fleecy.

P. AUREA : Golden-woolly ; leaves oblong. In wâdys, south of Dead Sea.

P. FRUTICOSA : Greyish-green woolly leaves and yellow flowers. Twelve other species and varieties. See Illustration XXXVIII.

PHŒNIX DACTYLIFERA (N.O. *Palmaceæ*) : The date-palm. Distinguished from other palms by its pinnate leaves ; the flower-spikes grow out from among the leaves. Indigenous to ravines east of the Dead Sea, and cultivated in the plains of Palestine.

PHRAGMITES COMMUNIS (N.O. *Gramineæ*) : Common reed.

PHYSALIS ALKEKENGI (*Solanaceæ*) : Ground-cherry. A perennial herb with solitary nodding flowers, ovate leaves, yellow corolla, and red fruiting calyx. Kurd-Dagh to Marash, and northward.

PHYSANTHYLLIS TETRAPHYLLA (N.O. *Leguminosæ*) : An annual herb with pinnate leaves, and heads with few flowers. Common in fields.

PHYSOCAULOS NODOSUS (N.O. *Umbelliferæ*) : An annual herb with minute white flowers. Mount Carmel, Samaria.

PHYSOSPERMUM AQUILEGIFOLIUM (N.O. *Umbelliferæ*) : A perennial herb with much-divided lower leaves and white flowers. Lebanon.

PHYTOLACCA DECANDRA (N.O. *Phytolaccaceæ*) : Pokeweed or red-ink plant. A branching herbaceous plant, with large green or purplish leaves, erect flower racemes, and dark purple berries, containing a purple-red juice, from which it derives its second name. A tincture made from the juice has been used as a remedy for rheumatism. Near Beyrout. Introduced from North America.

PICRIDIUM (N.O. *Compositæ*): Annual and perennial herbs with yellow flowers.

P. TINGITANUM=P. ORIENTALE: Wâdy Zuweirah; south-west of Dead Sea. Three other species.

PICRIS (N.O. *Compositæ*): Herbs of the chicory tribe, with a hairy pappus and yellow flowers; sometimes perennial.

P. STRICTA: Biennial. Base of Lebanon. Six other species.

PIMPERNEL. See ANAGALLIS.

PIMPINELLA (N.O. *Umbelliferæ*): European herbs, usually with the lower leaves more divided than the upper; white flowers and ovate fruit.

P. ANISUM: Aniseed. Common.

P. CRETICA: General. Eight other species and varieties.

PINASTER. See PINUS.

PINE. See PINUS.

PINK. See DIANTHUS.

PINUS PINEA. (N.O. *Coniferæ*): Stone-pine. Northern slopes of Lebanon.

P. HALEPENSIS: Aleppo pine. Near Hebron, heights of Judæan Wilderness, coast, etc. Var. *Carica*: Mount Gilead.

P. PINASTER: The pinaster. Near Beyrout; probably introduced.

P. PYRENAICA: Pyrenean pine. On Lebanon, 6,000 feet.

PIPTATHERUM BLANCHIANUM (P.) (N.O. *Gramineæ*): A grass resembling *Stipa*. Phœnician Plain. One other species.

PISTACHIA (N.O. *Anacardiaceæ*): Mostly small trees, with pinnate leaves and racemes of small flowers.

P. LENTISCUS: Most abundant on plains and lower slopes of hills.

P. MUTICA: Frequent.

P. PALÆSTINA: 'Teil-tree,' oak. On the lower slopes of hills throughout the country.

P. TEREBINTHUS: Doubtful if distinct from *P. Palæstina*.

P. VERA: The pistachia-tree which yields the pistachio nuts. Cultivated everywhere.

PISUM (N.O. *Leguminosæ*): Well-known climbing plants with edible seeds.

P. FULVEM: Jerusalem, Mount Tabor, Sidon, etc.

P. SATIVUM: The common pea. On the coast. Three other species.

PLANE (ORIENTAL). See PLATANUS.

PLANTAGO (N.O. *Plantaginaceæ*): A genus of stemless herbaceous plants.

P. LANCEOLATA: Ribwort plantain. Narrow, strong-ribbed leaves, and brown spiked heads of flowers.

P. MAJOR: Plantain.

P. MARITIMA: Sea-plantain. Eighteen other species and varieties.

PLANTAIN. See PLANTAGO.

PLATANUS ORIENTALIS (N.O. *Platanaceæ*): Oriental plane. Translated A.V. 'chestnut' (Gen. xxx. 37). By the banks of mountain streams and in woods, Lebanon, etc., but cultivated everywhere near water.

PLUMBAGO (N.O. *Plumbaginaceæ*): Herbaceous plants or shrubs, often highly acrid or caustic, with subsessile flowers in more or less elongated spikes.

P. EUROPÆA: General.

PLUME-THISTLE. See CIRSIUM.

PLUMELESS THISTLE. See CARDUUS.

POA BULBOSA (N.O. *Gramineæ*): Bulbous meadow-grass. Wâdy Heshban. Six other species of meadow-grass.

PODANTHUM (N.O. *Campanulaceæ*): Alpine or subalpine herbs, with solitary or clustered flowers in spikes or racemes, resembling *Campanula*.

P. LANCEOLATUM: Perennial. Subalpine Lebanon. About five other species and varieties.

PODONOSMA SYRIACUM (N.O. *Boraginaceæ*): *Onosma Syriacum:* A perennial herb resembling *Alkanna* and *Onosma,* with oblong leaves and bluish flowers.

POKEWEED. See PHYTOLACCA.

POLLINIA DISTACHYA (N.O. *Gramineæ*).

POLYCARPON (N.O. *Paronychiacæ*): Small plants (usually annual), with a great many minute flowers.

P. TETRAPHYLLUM: The Ghor, by Jericho. Two other species.

POLYGALA (N.O. *Polygaleæ*): Milkworts. Herbaceous plants with simple leaves and irregular flowers in racemes.

P. SUPINA: Galilean hills.

P. VULGARIS: Lebanon and Anti-Lebanon. Two other species.

POLYGONUM (N.O. *Polygonaceæ*): Annual or perennial herbs, or rarely undershrubs, with alternate leaves, flowers usually in spikes or racemes, and a funnel-shaped perianth, pink, white, or red.

P. AVICULARE: Knotweed. General in cultivated land.

P. BISTORTA: Bistort. Alpine Lebanon.

P. CONVOLVULUS: Climbing bindweed. General in cultivated land.

P. PERSICARIA: Spotted persicaria. Ditches, north, and Lebanon. Thirteen other species and varieties.

POLYPODIUM VULGARE (N.O. *Filices*): Polypody. Woods in Lebanon.

POLYPODY. See POLYPODIUM.

POLYPOGON MONSPELIENSIS (N.O. *Gramineæ*): Annual bean-grass. Hills of Gilead, Mount Tabor. Two other species.

PONDWEED. See POTAMOGETON, ZANNICHELLIA, and RUPPIA.

POPULUS ALBA (N.O. *Salicaceæ*): White poplar. General in the north.

P. EUPHRATICA: A.V. 'mulberry' (2 Sam. v. 23), but probably this poplar. Banks of Jordan, and all other rivers.

P. NIGRA: Black poplar. By water in the north.

P. PYRAMIDALIS: Most abundant in the valleys of Anti-Lebanon.

PORTULACA (N.O. *Portulacaceæ*): Low succulent herbs, with solitary or clustered flowers—yellow, purple, or rose-coloured.

P. OLERACEA: Common purslane. A prostrate annual, with wedge-shaped leaves and small clustered or solitary yellow flowers. In the plains.

POSTIA LANUGINOSA (N.O. *Compositæ*): A woolly herb with many stems from a woody root-stock.

POTAMOGETON NATANS (N.O. *Juncaginaceæ*): Broad-leaved pondweed. Stagnant waters; general.

P. LUCENS: Shining pondweed. Two other species.

POTENTILLA (N.O. *Rosaceæ*): Shrubby or herbaceous plants allied to the strawberry, but differing in having their seeds in a dry, not a pulpy, receptacle.

P. ANSERINA: The silver-weed. A roadside plant, with pinnate leaves clothed with white silky down, and yellow flowers.

P. LIBANOTICA (P.): A yellow-flowered variety. Rocks in Lebanon. Five other species.

POTERIUM (N.O. *Rosaceæ*): Burnet. Perennial herbs or shrubs with pinnate leaves, and sessile capitate or spiked flowers.

P. SPINOSUM: Thorny burnet. The branches of this species end in thorns; it has an ascending spiked inflorescence, and an apple-like fruiting calyx. Five other species and one variety.

P. VILLOSUM: Eastern deserts, east of Gilead.

PRANGOS (N.O. *Umbelliferæ*): Perennial herbs with compound leaves, and numerous umbels of yellowish flowers.

P. ASPERULA (P.): Galilee, etc.

P. HERMONIS (P.): Mount Hermon.

PRASIUM MAJUS (N.O. *Labiatæ*): A shrub with ovate leaves, two-flowered whorls, and white corolla. Littoral district, Esdraelon; Galilee; Gilead.

PRICKLY PEAR. See OPUNTIA.

PRICKLY SHIELD-FERN. See ASPIDIUM.

PRIMULA ACAULIS (N.O. *Primulaceæ*): Primrose. Galilee, Lebanon.

PRINCE'S-FEATHER. See AMARANTHUS.

PROSOPIS (N.O. *Leguminosæ*): Of the suborder *Mimoseæ*. Trees or shrubs often armed with spines or prickles, with leaves twice pinnate, and small green or yellowish flowers.

P. SPICIGERA: This species has a sweet pod. Jordan Valley.

P. STEPHANIANA: The pod irregularly curled or twisted. Coast and Jordan Valley.

PRUNELLA VULGARIS (N.O. *Labiatæ*): Self-heal. A small straggling plant, with ovate leaves and densely spiked heads of purple flowers. Littoral and mountain districts.

PRUNUS (N.O. *Rosaceæ*): The plum-tree.

P. URSINA (P.): Lebanon and Anti-Lebanon, 5,000 feet.

PSORALEA (N.O. *Leguminosæ*): Small shrubs or perennial herbaceous plants, sometimes with tuberous farinaceous roots; leaves generally compound; and blue, white, or purple flowers in short spikes or racemes.

P. BITUMINOSA: By the Dead Sea.

PSILURUS NARDOIDES (N.O. *Gramineæ*): A grass with inflorescence in slender spikes.

PTERANTHUS (N.O. *Paronychiaceæ*): Annual fleshy herbs with three-branched cymes of flowers.

P. ECHINATUS: Judæa, Moab, etc.

PTERIS AQUILINA (N.O. *Filices*): Bracken fern. Galilee, by the Leontes River.

P. CRETICA : Lebanon.

P. LONGIFOLIA : Lower slopes of Lebanon.

PTEROCEPHALUS INVOLUCRATUS (N.O. *Dipsaceæ*) : An annual herb resembling scabious, with pinnate leaves, and pink to dark purple flowers. Everywhere in dry hilly places.

P. PLUMOSUS : Universal in hilly districts.

PTOSIMOPAPPUS BRACTEATUS (N.O. *Compositæ*) : An evergreen herb, woody at base, with oblong leaves and ovate heads. Galilean hills.

PULICARIA (N.O. *Compositæ*) : Annual or perennial herbs with many-flowered heads.

P. DYSENTERICA : Fleabane. Moist places, coast, Esdraelon, etc.

P. SICULA : On the coast. Seven other species and varieties.

PUNICA GRANATUM (N.O. *Myrtaceæ*) : Pomegranate. A tree from 15 to 20 feet high, with oblong leaves, scarlet or white blossoms, and a fruit with a curious structure, consisting of two whorls of carpels, one above the other. Cultivated everywhere ; apparently indigenous to Gilead.

PURPLE LOOSESTRIFE. See LYTHRUM.

PUSCHKINIA (N.O. *Liliaceæ*) : A small bulbous plant resembling *Scilla*, with two narrow leaves, and a stalk bearing a raceme of pale blue bell-flowers.

P. SCILLOIDES (var. *Libanotica*) : Alpine Lebanon.

PUTORIA CALABRICA (N.O. *Rubiaceæ*) : A low shrub with oblong opposite leaves, pink flowers, and dark crimson berries. Rocky places, Jerusalem to Lebanon.

PYENOCYCLA TOMENTOSA (N.O. *Umbelliferæ*) : A shrubby perennial with white hirsute flowers. Wâdy Ghurundel, south-east of Dead Sea.

PYRETHRUM (N.O. *Compositæ*) : Perennial herbs, sometimes woody at the base, with many-flowered heads, yellow or white.

P. DENSUM=P. SYRIACUM: Yellow radiate heads. Alpine districts of Lebanon. Seven other species.

PYRUS (N.O. *Rosaceæ*): The genus in which occur the apple- and pear-tree.

P. BOVEANA (P.): Lower parts of Anti-Lebanon.

P. MALUS: Apple. Several poor varieties in cultivation.

P. SYRIACA: In the littoral and northern hill districts and Gilead.

Q.

QUAKING-GRASS. See BRIZA.

QUERCUS SESSILIFLORA (N.O. *Cupuliferæ*) and var. *Cedrorum*: Oak. Higher parts of Lebanon, Hauran, Gilead. Var. *Pinnatifida*.

Q. ÆGILOPS (var. *Ithaburensis*): Carmel, Tabor, etc.

Q. BALOUT:

Q. CERRIS: Lower and Subalpine Lebanon.

Q. COCCIFERA: Prickly-leaved evergreen oak. Var. *Calliprinos*. Lebanon, Mount Tabor, Gilead.

Q. EHRENBERGII: Lower Lebanon.

Q. ILEX: Holm-oak. Near the coast; indigenous.

Q. INFECTORIA and var. *Latifolia*=Q. SYRIACA: Lebanon and Anti-Lebanon.

Q. INFECTORIA (var. *Boissieri*): Lebanon.

Q. LIBANI: Northern Lebanon.

Q. LOOK: On the east side of Hermon, 5,000 feet. The Hauran, etc.

Q. PSEUDOCOCCIFERA: The commonest variety, sometimes attaining a splendid growth, as the Oak of Libbaya in Galilee. Carmel, Galilee, Gilead, Bashan. Var. *Palæstina*: Southern Palestine, western hills of Judæa, Hebron.

QUERIA HISPANICA (N.O. *Alsineæ*): A small annual with petalless flowers. Below Hermon.

QUINCE. See CYDONIA.

R.

RAMPION. See CAMPANULA.

RANUNCULUS (N.O. *Ranunculaceæ*): A large genus of herbaceous plants, having a green calyx of five sepals and a coloured corolla of five petals, with numerous stamens and carpels.

R. AQUATILIS: Water-ranunculus. White flowers. (Water-crowfoot.)

R. ARVENSIS: Corn-crowfoot. Universal.

R. ASIATICUS: All over the country.

R. CUNEATUS (P.): Lebanon.

R. FICARIA: Lesser celandine. General; coast and hills.

R. MYOSURIOIDES: On snow-line of Lebanon and Anti-Lebanon, 6,500 feet. Thirty other species and varieties.

RAPE-SEED. See BRASSICA.

RAPHANUS SATIVUS (N.O. *Cruciferæ*): Radish. Grown everywhere.

R. RAPHANISTRUM: Wild-radish. In fields. Two other species.

RAPISTRUM RUGOSUM (N.O. *Cruciferæ*): A plant resembling *Raphanus*. Sea-coast and Lebanon.

REAUMURIA PALÆSTINA (N.O. *Tamaricaceæ*): A shrub closely allied to tamarisk. Barren marl hills round the Dead Sea.

REED. See ARUNDO and PHRAGMITES.

RESEDA (N.O. *Resedaceæ*): Herbaceous or slightly shrubby plants, with lanceolate leaves and spikes of small flowers.

R. ALBA: General.

R. ODORATA: Mignonette. Wâdy Zuweirah, south-west end of the Dead Sea.

R. ORIENTALIS (P.): Sandy fields on the coast. Ten other species and varieties.

RETAMA RŒTAM (N.O. *Leguminosæ*): White broom. A bush with scanty lance-shaped leaves, white flowers, and an oblong pod, found in Arabia and Syria. On all the hills in desert, rocky parts, especially about the Dead Sea; Gilead and Moab.

RHAGADIOLUS STELLATUS (N.O. *Compositæ*): An annual, 6 inches to a foot high, with radical leaves and numerous small yellow flower-heads. Universal. Var. *Leiolænus*: Near Jerusalem.

RHAMNUS (N.O. *Rhamnaceæ*): The buckthorn. Shrubs or small trees, many of them spiny, with thick evergreen leaves in some species, deciduous in others; small greenish flowers and a fleshy fruit.

R. ALATERNUS: General.

R. PALÆSTINA: General.

R. PUNCTATA: Northern districts. Eight other species.

RHAPONTICUM PUSILLUM (N.O. *Compositæ*): *R. pygmæum*. Perennials of the thistle tribe. General on Hills of Benjamin, Samaria, Galilee, etc.

RHEUM RIBES (N.O. *Polygonaceæ*): Rhubarb. A handsome herb with thick root-stock; thick, short, annual stems; and broad leaves. Moab, Lebanon.

RHINANTHUS MINOR (N.O. *Scrophulariaceæ*): Yellow rattle. A common plant with oblong serrated leaves, and yellow flowers in the axils of the upper leaves. In the north.

R. MAJOR: Plain of Huleh.

RHODODENDRON PONTICUM (N.O. *Ericaceæ*), (var. *Brachycarpum*): Common rhododendron. Subalpine Lebanon.

RHUBARB. See RHEUM.

RHUS (N.O. *Anacardiaceæ*): Sumach. A large genus of shrubs or low bushes, generally with compound leaves and very small flowers.

R. COTINUS: Venetian sumach. A shrub with shining green leaves and feathery inflorescence. This species yields a yellow dyewood called *young fustic*.

R. SYRIACA: Southern desert and base of Lebanon. Two other species.

RIBES ORIENTALE (N.O. *Grossulariaceæ*): Currant. A shrub with dental leaves, erect racemes of greenish-yellow flowers, and red fruit. Lebanon and Hermon.

RICINUS COMMUNIS (N.O. *Euphorbiaceæ*): Castor-oil plant. A native of India, with jointed reddish stems, large palmate leaves, monœcious flowers, and prickly globular fruit. Jordan Valley, and hot plains and valleys.

RICOTIA LUNARIA (P.) (N.O. *Cruciferæ*): Rock-stock. An annual with divided leaves, pink flowers, and an oblong pod.

RIDOLFIA SEGETUM (N.O. *Umbelliferæ*): An annual herb with branching stem, ovate leaves, and yellow flowers. Maritime plains.

RIGID BUCKLER-FERN. See LASTREA.

ROBBAIREA PROSTRATA (N.O. *Paronychiaceæ*): A herb with prostrate stems, oblong leaves, and loose cymes of pink flowers. Hill country of Judæa, and southern desert.

ROCHELIA STELLULATA (N.O. *Boraginaceæ*): A herb with oblong leaves and flowers in racemes. Northern plains, Anti-Lebanon.

ROCKET. See HESPERIS.

ROCK-ROSE. See CISTUS and HELIANTHEMUM.

ROCK-STOCK. See RICOTIA.

RŒMERIA (N.O. *Papaveraceæ*): A genus nearly related to *Papaver* and *Glaucium*. Small herbs with divided leaves, and large solitary violet flowers.

R. HYBRIDA: In fields.

R. ORIENTALIS: Zara; east side of Dead Sea.

ROMULEA (N.O. *Iridaceæ*): A bulbous plant with crocus-like solitary flowers in a two-leaved spathe.

R. BULBOCODIUM: Flowers pale violet to white, yellow towards the base. Littoral and central districts. Two other species.

ROSA CANINA (N.O. *Rosaceæ*): Dog-rose. A variable species with curved branches and pink flowers, the hip turning blackish-crimson. Galilee, northward.

R. DUMETORUM: Stout prickles; five to seven ovate leaflets; white flowers; outer surface of sepals woolly. Var. *Schergiana* (P.): Anti-Lebanon, 5,000 feet.

R. GLUTINOSA: Unequal prickles; five to seven leaflets; flowers solitary, pink. Hills and mountains, north.

R. PHŒNICIA: Long climbing branches; hooked prickles; on lower leaves five leaflets, and on the upper leaves three; numerous paniculate white flowers. Common in cultivated parts of the country.

R. TOMENTOSA: Highest mountains. Six other species and varieties.

ROSE-BAY. See EPILOBIUM.

ROSE-MALLOW GROUP. See HIBISCUS.

ROSE-OF-JERICHO. See ANASTATICA.

ROSMARINUS OFFICINALIS (N.O. *Labiatæ*): Rosemary. A bush with narrow greyish leaves, and white or pale blue flowers.

ROTTBOELLIA DIGITATA (N.O. *Gramineæ*): Belonging to a genus of grasses with inflorescence in round jointed spikes. Near the Dead Sea.

ROUGH DOG'S-TAIL GRASS. See CYNOSURUS.

ROYAL FLOWERING FERN. See OSMUNDA.

RUBIA (N.O. *Rubiaceæ*): Perennial herbs with red roots, somewhat shrubby at base, and clothed with stiff hairs; flowers axillary or terminal.

R. TINCTORUM: Madder. Galilee and Lebanon. Seven other species and varieties.

RUBUS (N.O. *Rosaceæ*): Bramble, blackberry. Prickly shrubs with alternate leaves, pink or white flowers, and black fruit.

R. DISCOLOR: Strong prickles; pink flowers.

R. TOMENTOSUS: Flowers white. Lebanon, etc. One other species and one variety.

RUE. See RUTA.

RUMEX (N.O. *Polygonaceæ*): The dock and sorrel genus. Herbs, more rarely undershrubs, with alternate leaves and flowers in panicles.

R. ACETOSA: Sorrel.

R. CRISPUS: Curled dock. Lebanon and the North.

R. OBTUSIFOLIUS: Broad dock. General in waste places.

R. ORIENTALIS: Lebanon.

R. PULCHER: Fiddle-dock. Fourteen other species and varieties.

RUPPIA SPIRALIS (N.O. *Juncaginaceæ*): Tassel pondweed. A submersed aquatic plant with the flowers on spiral stalks. Salt pools on the coast.

RUSCUS ACULEATUS (N.O. *Asparagaceæ*): Butchers'-broom. Stems green, erect, rigid, with leaf-like branches terminating in a spine: small greenish-white flowers; and bright scarlet berry about the size of a cherry. Central and Galilean hills; Lower Lebanon.

RUSH. See SCIRPUS, JUNCUS, HELIOCHARIS, and SCHŒNUS.

RUTA (N.O. *Rutaceæ*): Rue. Herbs or undershrubs, the pinnate leaves holding small glands containing a scented oil; flowers yellowish or greenish.

R. CHALEPENSIS (var. *Bracteosa*): Generally distributed.

R. GRAVEOLENS: Cultivated.

S.

SACCHARUM (N.O. *Gramineæ*): A genus of grasses with jointed stems and inflorescence in loose panicles.

S. ÆGYPTIACUM: Beyrout.

S. OFFICINARUM: Sugar-cane. Cultivated.

SAGINA APETALA (N.O. *Alsineæ*): A small inconspicuous herbaceous plant, which forms little tufts on walls and dry banks. Coast of Palestine.

SAGITTARIA SAGITTIFOLIA (N.O. *Alismaceæ*): Arrow-head. An aquatic perennial, bearing directly from the root glossy arrow-headed leaves, and delicate white flowers on a branched stalk.

ST. JOHN'S WORT. See HYPERICUM.

SALICORNIA (N.O. *Chenopodiaceæ*): Succulent marine plants with jointed stems.

S. FRUTICOSA: Maritime plains round the Dead Sea.

S. HERBACEA: Glasswort. A leafless plant, with spikes of flowers jointed like the stem. In salt places, common.

SALIX SAFSAF (N.O. *Salicaceæ*): Willow. Banks of Jordan, Arnon, and Callirrhoe.

S. ALBA: White willow. By streams, coast, etc.

S. CAPRÆA: Sallow. Lebanon.

S. FRAGILIS: Crack willow or withy. By streams, Lebanon.

S. PEDICILLATA: Lebanon. Several other species.

SALLOW. See SALIX.

SALSIFY. See TRAGOPOGON.

SALSOLA (N.O. *Chenopodiaceæ*): An extensive genus of marine plants, herbaceous or shrubby, with alternate or opposite, fleshy or prickly leaves, small stalkless flowers, and a fruit with a loose shell containing one seed.

S. KALI: Saltwort. All round the Dead Sea.

S. LANCEFOLIA (P.): The Northern Ghor.

S. TETRAGONA: Round the Dead Sea. Five other species and varieties.

SALTWORT. See SALSOLA.

SALVADORA PERSICA (N.O. *Salvadoraceæ*): A shrub with jointed stems, simple leathery leaves, and loose branching panicles of small flowers. Ghor-es-Safieh, south-east of Dead Sea; Engedi, west of Dead Sea; Seisaban, north-east of Dead Sea. See p. 28.

XXXIX.—SAPONARIA OFFICINALIS : SOAPWORT.

XL.—STATICE SINUATA : SEA-LAVENDER.

To face page 148.

SALVIA (N.O. *Labiatæ*): A varying genus of under-shrubs and herbs.

S. GLUTINOSA: Yellow flowers. Mount Hermon, 4,000 feet.

S. GRANDIFLORA: Oblong leaves; blue flowers in racemes or panicles. Coast to Subalpine Lebanon.

S. MONTBRETII: Erect stems; oblong lower leaves; stem-leaves linear; corolla purple. Northern hills.

S. POTENTILLÆFOLIA: Small leaves; oblong leaflets; corolla yellow, turning blue. Northern Syria.

S. SYRIACA: Leaves yellowish-green; floral leaves ovate; corolla white. Plain of Gennesaret, etc.

S. VIRGATA: General. Thirty-eight other species and varieties.

SAMBUCUS EDULUS (N.O. *Caprifoliaceæ*): Dwarf elder. Waste places on and under Lebanon.

S. NIGRA: Black elder. Cultivated and spontaneous.

SAMOLUS VALERANDI (N.O. *Primulaceæ*): Brook-weed or water pimpernel. A small plant with bright green leaves and terminal white flowers. Pools in the Ghor, etc.

SANDWORT. See ARENARIA.

SAPONARIA (N.O. *Sileneæ*): Herbaceous plants allied to *Dianthus*.

S. OFFICINALIS: Soapwort. Foliage resembling sweet-william; rose-coloured flowers in a panicle. Cultivated for its saponaceous root, and used for washing woollens. See Illustration XXXIX.

S. ORIENTALIS: Plains and wilderness of Judæa.

S. SYRIACA: Central districts. Four other species.

SATUREIA (N.O. *Labiatæ*): Savory. Annual herbs or shrubby perennials.

S. CUNEIFOLIA: A low shrub with oblong leaves and clusters of flowers; corolla pink. Subalpine Lebanon. One other species.

SAVIGNYA ÆGYPTIACA (N.O. *Cruciferæ*): A small annual Egyptian herb with thick leaves, racemes of pale purple flowers, and numerous seeds. The southern desert.

SAXIFRAGA (N.O. *Saxifragaceæ*) : Saxifrage. A genus consisting chiefly of dwarf herbs with tufted foliage, and white, red, or yellow flowers.

S. HEDERACEA : Moist rocks in hill districts.

S. TRIDACTYLITES : A small plant with leaves tinged with red, and small white flowers. Galilee, Lebanon, Anti-Lebanon.

SCABIOSA (N.O. *Dipsaceæ*) : Herbaceous plants with erect stalks and terminal heads of flowers, often radiated like composite flowers.

S. ARENARIA = S. ARGENTEA : Root-leaves oblong; white radiating corolla. Southern desert.

S. PALÆSTINA, and varieties : Universal in grassy places. Eight other species and varieties.

SCALE-FERN. See ASPLENIUM CETERACH.

SCALEGERIA (N.O. *Umbelliferæ*) : Biennial herbs with white flowers and minute fruits resembling *Pimpinella*.

S. CRETICA : Rocky places, thickets, coast.

S. MEIFOLIA : Thickets and chalky rocks, Anti-Lebanon, etc.

SCANDIX (N.O. *Umbelliferæ*) : An annual white-flowered herb.

S. PECTEN-VENERIS : Shepherd's-needle. Five other species.

SCHIMPERA ARABICA (N.O. *Cruciferæ*) : A small Arabian herb, with curved leaves, flowers with simple petals, and a one-celled pouch containing a solitary seed. Desert south of Gaza.

SCHŒNUS NIGRICANS (N.O. *Cyperaceæ*) : Bog-rush.

SCILLA (N.O. *Liliaceæ*) : Squill. Well-known bulbous plants with long narrow leaves and blue flowers.

S. AUTUMNALIS : Autumn squill.

S. BIFOLIA : Snow-line summit of Jebel Makmel.

S. CERNUA = S. SIBERICA : Anti-Lebanon.

S. HYACINTHOIDES : All the littoral districts. Two other species.

SCIRPUS SETACEUS (N.O. *Cyperaceæ*): Mud-rush. Lebanon.

S. LACUSTRIS: Lake club-rush.

S. MARITIMUS: Sea club-rush. General. Seven other species of *Scirpus*.

SCHISMUS (N.O. *Gramineæ*): A genus of grasses with inflorescence in panicles.

S. MARGINATUS: Desert east of Moab.

S. MINUTUS: Wâdy Zuweirah.

SCLERANTHUS ANNUUS (N.O. *Paronychiaceæ*): A low herb with awl-shaped leaves. Jordan Valley.

SCLEROPOA (N.O. *Gramineæ*): A tufted annual grass.

S. PHILISTIA: Sands, coast. Two other species.

SCOLOPENDRIUM VULGARE (N.O. *Filices*): Hart's-tongue fern. Lebanon, caves; Central Palestine.

S. HEMIONITIS: Cisterns and caves, Mount Gerizim.

SCOLYMUS (N.O. *Compositæ*): Handsome thistle-like plants with variegated spinous leaves and solitary saffron-coloured flowers.

S. HISPANICUS: Waste lands, general.

S. MACULATUS: Jordan Valley.

SCORPIURUS (N.O. *Leguminosæ*): A genus distinguished by having the fruit in a jointed pod, each containing one seed; leaves simple; flowers yellow or sometimes purple.

S. SULCATA: Central and maritime plains. Three other species and one variety.

SCORZONERA (N.O. *Compositæ*): Perennial herbs with lanceolate leaves and terminal heads of yellow or purple flowers. One or two species are used as vegetables.

S. MOLLIS: A hairy plant with linear leaves and yellow flowers. Ten other species and varieties.

SCROPHULARIA (N.O. *Scrophulariaceæ*): Fig-wort. A genus containing nearly a hundred species of herbs or undershrubs with small greenish or lurid flowers.

S. DESERTI : Southern desert.

S. LUCIDA : Thick leaves and blackish-purple flowers. Between Hebron and Jerusalem.

S. SYRIACA : Near Nazareth. About eighteen other species and varieties.

SCUTELLARIA (N.O. *Labiatæ*) : Skull-cap. Herbaceous or rarely shrubby plants.

S. ORIENTALIS (var. *Alpina*) : Ovate leaves; the yellow flowers in an oblong dense spike. Alpine and subalpine regions. One other species and two varieties.

SEA-BLITE. See SUÆDA.

SEA-LAVENDER. See STATICE.

SECURIGERA CORONILLA (N.O. *Leguminosæ*) : An annual herb resembling *Coronilla*, with yellow flowers. On the coast and inland plains.

SEDGE. See CAREX and CYPERUS.

SEDUM (N.O. *Crassulaceæ*) : Stonecrop. Herbaceous or shrubby plants, with stems terminating in cymes of yellow, white, or purple flowers, and shorter flowerless stems with fleshy leaves.

S. ALBUM : Lebanon, etc.

S. ALTISSIMUM : Hills about Jerusalem.

S. GLAUCUM : Everywhere in mountain and rocky districts.

S. PALÆSTINUM (P.) : Mount Carmel, etc.

S. RUBENS : Lebanon. Six other species and varieties.

SEIDLITZIA (N.O. *Chenopodiaceæ*) : Annual herbs or shrubs, with jointed stem and opposite leaves.

S. FLORIDA : Eastern desert.

SELAGINELLA DENTICULATA (N.O. *Lycopodiaceæ*) : Club-moss. Lebanon.

SELF-HEAL. See PRUNELLA.

SENEBIERA CORONOPUS (N.O. *Cruciferæ*): Swine's-cress. An inconspicuous plant with finely divided leaves and small white flowers.

SENECIO (N.O. *Compositæ*): This genus, in which occurs the common groundsel, is one of the most extensive, containing nearly nine hundred varying species. All have an involucre consisting of a single series of scales of equal length. Some of the Palestine varieties are very fine.

S. DORIÆFORMIS: A tall Alpine herb. Subalpine and Alpine Lebanon, etc.

S. ERRATICUS: Wet places; Galilee.

S. VULGARIS: Groundsel. On cultivated land, etc. Ten other species and varieties.

SERAPIAS (N.O. *Orchideæ*): A small genus of terrestrial orchids resembling *Ophrys*.

S. PSEUDOCORDIGERA = S. LONGIPETALA: Coast; Central Palestine, etc.

SERRATULA CERINTHEFOLIA (N.O. *Compositæ*): A perennial herb with oblong flower-heads and yellow florets. Dry hills and fields.

SESAMUM INDICUM (N.O. *Sesameæ*): An annual herb with opposite or alternate leaves, axillary flowers, and seeds containing a fixed oil as tasteless as that of the olive. Ghor-es-Safieh, south-west of Dead Sea. Cultivated and semi-spontaneous.

SETARIA GLAUCA (N.O. *Gramineæ*): A grass with panicled inflorescence. Beyrout.

SHEPHERD'S-PURSE. See CAPSELLA and THLASPI.

SHEPHERD'S WEATHER-GLASS. See ANAGALLIS.

SHERARDIA ARVENSIS (N.O. *Rubiaceæ*): Field-madder. A small annual with trailing stems a few inches long, whorls of about six narrow leaves, and heads of tiny pinkish-blue flowers in a whorl of leaves. Coast, Gennesaret, etc.

SIDERITIS (N.O. *Labiatæ*): Herbs, shrubs, or under-shrubs, with small flowers, generally yellow, in the axils of leaf-like bracts.

S. LIBANOTICA: Alpine Lebanon and Hermon.

S. ROMANA: Littoral districts. Five other species.

SIEBERA PUNGENS (N.O. *Compositæ*): A thistle-like annual with lance-shaped leaves and solitary flower-heads. Lebanon and Anti-Lebanon.

SILENE (N.O. *Sileneæ*): Campion, Catchfly. An extensive genus of annual and perennial plants, all of which have united sepals, ten stamens, and a stalked capsule.

S. ATOCION: A pretty annual. Coast and hills near Gilead.

S. BREVIPES (P.): Mount Nebo.

S. DAMASCENA (P.): Mountain and hill districts.

S. INFLATA: Bladder-campion. A perennial with ovate glaucous leaves and numerous panicled white flowers with greyish-green inflated calyxes. Coast and central regions, Jordan Valley.

S. PALÆSTINA (P.): Desert near Gaza.

S. PRUINOSA: Anti-Lebanon, 7,000 feet.

S. VILLOSA: Near the Dead Sea. Forty-two other species and varieties.

SILER TRILOBIUM (N.O. *Umbelliferæ*): A plant with leaves like a columbine, and umbels of whitish flowers. Wooded parts of Lebanon.

SILYBUM MARIANUM (N.O. *Compositæ*): Milk-thistle. A large thistle with wavy, spreading, spinous leaves, variegated with green and white, and purple florets with long tubes. Universal.

SINAPIS (N.O. *Cruciferæ*): Herbaceous plants closely allied to *Brassica*.

S. ALBA: Mustard. General.

S. ARVENSIS: Charlock. Generally distributed.

S. NIGRA: This plant grows 10 or 12 feet high in Palestine, and is considered by some to be the mustard of the Bible. It yields the mustard of commerce, mixed with *S. alba*.

S. ORIENTALIS : Plains and hills.

S. PINCEA : Jericho.

SISON EXALTATUM (P.) (N.O. *Umbelliferæ*) : A biennial herb with small white flowers. Mid-regions of Lebanon.

SISYMBRIUM (N.O. *Cruciferæ*) : Small herbaceous plants.

S. OFFICINALE : Hedge-mustard. An erect plant with rough stems and leaves, small pale yellow flowers, and rough pods.

S. SOPHIA : Flix-weed. Ten other species and varieties.

SKULL-CAP. See SCUTELLARIA.

SMILAX (N.O. *Smilaceæ*) : A large genus of climbing shrubs with tuberous roots, stems generally prickly, stalked leaves, tendrils, and flowers in globular heads.

S. ASPERA : Littoral districts; lower hills, Samaria, etc. Var. *Mauritanica* : Near Sidon and Beyrout.

SMYRNIUM (N.O. *Umbelliferæ*) : Biennial herbs with umbels of yellow or yellow-green flowers.

S. OLUSATRUM : Alisander. This plant grows to a height of several feet, with divided leaves of a pale green colour; the leaf-stalks used to be used as a salad. Maritime, mountain, and northern districts.

S. SYRIACA (P.): Lower valleys of Lebanon and Anti-Lebanon. Three other species.

SNAPDRAGON. See ANTIRRHINUM.

SOLANUM (N.O. *Solanaceæ*) : An important genus with very varying species.

S. DULCAMARA : Woody nightshade, or bitter-sweet. Purple flowers and bright red berries.

S. NIGRUM : Nightshade. Has ovate leaves, white flowers, and black berries.

S. SANCTUM or SODOMÆUM : Round the Dead Sea. Two other species.

SOLENANTHUS (N.O. *Boraginaceæ*) : Allied to *Cynoglossum*, differing in the corolla, which is tubular ; it is often covered with white down, and the flowers are in racemes.

S. AMPLEFOLIUS (P.): Rocky places, Anti-Lebanon.

S. TOURNEFORTII.: Lebanon and Anti-Lebanon.

SOLENOSTOMA ARGEL (N.O. *Asclepiadaceæ*): An erect branching undershrub, with white fleshy leaves and white umbellate flowers. Wâdys south of Dead Sea.

SOLIDAGO VIRGA-AUREA (N.O. *Compositæ*): Golden rod. An erect herb, with alternate serrated leaves and racemes of numerous small yellow flowers. Lebanon and Anti-Lebanon.

SONCHUS (N.O. *Compositæ*): Herbaceous plants with heads composed of many florets.

S. OLERACEUS: Sow-thistle. A hollow-stemmed plant, with sharply-toothed leaves and yellow flowers. Universal. Two other species.

SORBUS AUCUPARIA (N.O. *Rosaceæ*): Mountain-ash, rowan. Small trees with pinnate leaves and scarlet berries. Northern hills.

S. ARIA (var. *Græca*): White beam-tree.

S. TRILOBATA: Lebanon, 3,000 to 5,000 feet.

SORGHUM (N.O. *Gramineæ*): A genus of grasses with inflorescence in panicles.

S. HALEPENSE: Lake Huleh.

S. VULGARE: Indian millet. Area India, where it is called *durrha*.

SORREL. See RUMEX.

SORREL (MOUNTAIN). See OXYRIA.

SOW-BREAD. See CYCLAMEN.

SOW-THISTLE. See SONCHUS.

SPARGANIUM RAMOSUM (N.O. *Typhaceæ*): Bur-weed. A water-plant with linear leaves and flowers in globular heads. On edges of lakes, ponds, and streams.

SPARTIUM JUNCEUM (N.O. *Leguminosæ*): Spanish broom. The growth of this bush resembles the common broom, but the green twigs are rush-like, the leaves scarce and lance-shaped; the yellow pea-flowers in racemes at the ends of the twigs are scented. Central districts, upland plains, and sub-alpine regions.

SPECULARIA (N.O. *Campanulaceæ*): Venus' looking-glass. An annual plant with simple or branching stems and violet flowers.

S. SPECULUM: Subalpine regions. Two other species and one variety.

SPEEDWELL. See VERONICA.

SPERGULA (N.O. *Alsineæ*): Annual herbs with slender somewhat whorled leaves.

S. ARVENSIS. Fields.

S. PENTANDRA: Near Gaza.

SPERGULARIA (N.O. *Alsineæ*): Spurrey sandwort. Annual or perennial herbs with opposite fleshy leaves and fruiting pedicles.

S. RUBRA: Reddish flowers. Roadsides, common. Three other species.

SPINDLE-TREE. See EUONYMUS.

SPIRANTHES AUTUMNALIS (N.O. *Orchideæ*): Lady's-tresses. An orchid with tuberous roots, grass-like leaves, and small flowers in a spiral spike.

SPLEEN-WORT. See ASPLENIUM.

SPOTTED PERSICARIA. See POLYGONUM.

SPURGE. See EUPHORBIA.

SPURREY SANDWORT. See SPERGULARIA.

SQUILL. See SCILLA.

STACHYS (N.O. *Labiatæ*): Herbs or undershrubs varying in habit, with flowers two or more in a whorl.

S. CASSIA: Safed, Galilee.

S. CRETICA: All the hill districts. About twenty-four other species and varieties.

STÆHELINA APICULATA (N.O. *Compositæ*): A perennial shrub with narrow leaves downy on the under-surface, terminal flower-heads, and pink florets. Cliffs in Higher Lebanon.

STAPHYLEA PINNATA (N.O. *Sapindaceæ*): Bladder-nuts. A shrub with opposite pinnate leaves, white pendulous flowers in racemes, and large inflated capsules. Northern and subalpine woods.

STAR-OF-BETHLEHEM. See ORNITHOGALLUM.

STAR-THISTLE. See CENTAUREA.

STATICE (N.O. *Plumbagineæ*): A very interesting genus of herbaceous or subshrubby plants. The flowers are spiked or in panicles; the calyx funnel-shaped; petals five.

S. ÆGYPTIACA: All round the Dead Sea.

S. LIMONIUM: Sea-lavender. Round the Dead Sea.

S. SINUATA: Littoral districts and east of Dead Sea. See Illustration XL. Seven other species.

STELLARIA MEDIA (N.O. *Alsineæ*): Common chick-weed. An inconspicuous herb with white flowers. General.

STERIGMA SULPHUREUM (N.O. *Cruciferæ*): A woolly herb with oblong leaves, yellow flowers, and a one-seeded cell. Cœlesyria to Damascus.

STERNBERGIA (N.O. *Amaryllidaceæ*): A genus of dwarf bulbous plants, with linear leaves and a single funnel-like flower.

S. CLUSIANA: Universal except Jordan Valley.

S. LUTEA: Resembles a yellow autumnal crocus.

S. PULCHELLA: Lower Lebanon.

STIPA PENNATA (N.O. *Gramineæ*): Feather-grass. Four other species.

STONECROP. See SEDUM.

STORK'S-BILL. See ERODIUM.

STRAWBERRY-TREE. See ARBUTUS.

STYRAX OFFICINALE (N.O. *Styracaceæ*): Storax-tree. A small tree with dark green simple leaves, silvery on the under-side, and racemes of white flowers like orange-blossom; the calyx bell-shaped; the corolla five-parted; the fruit globose. Hill regions, abundant; Gilead, Carmel, Tabor, Galilee, etc. See p. 33.

SUÆDA (N.O. *Chenopodiaceæ*): Sea-blite. Herbs and shrubs growing in salt marshes and sandy places.

S. ASPHALTICA: P. A white, woody, branched perennial, the leaves covered with whitish scales, the flowers in long loose spikes. Shores of Dead Sea.

S. FRUTICOSA: Shrubby sea-blite. Round the Dead Sea. Three other species.

SUGAR-CANE. See SACCHARUM.

SUMACH. See RHUS.

SUNDEW. See DROSERA.

SWEET-FLAG. See ACORUS.

SWEET-SULTAN. See AMBERBOA.

SWORD-LILY. See GLADIOLUS.

SYMPHYTUM (N.O. *Boraginaceæ*): Rough perennials with sessile or stalked leaves, and solitary or twin racemes of pale yellow, purple, or blue flowers.

S. ORIENTALE: Gilead and Bashan.

S. PALÆSTINUM: Jerusalem, Tabor, Galilee, etc.

SYNELCOSCIADIUM CARMELI (N.O. *Umbelliferæ*): An annual herb with white flowers. Shechem, Carmel, Tiberias, etc.

T.

TAMARIX (N.O. *Tamaricaceæ*): Tamarisk. Shrubs or small trees, with twiggy branches, small scale-like leaves, and small white or pink perfect flowers in spike-like racemes.

T. JORDANIS (P.): Banks of Lower Jordan.

T. NILOTICA: Southern desert.

T. SYRIACA (P.): Coast near Sidon.

T. TETRAGYNA: Coast near Carmel. Several other coast and desert species.

TAMUS COMMUNIS (N.O. *Dioscoreaceæ*): Black bryony. Well-known climbing plants with tuberous roots and twining stems. The fruit is a round three-celled berry. Common in woods and glens. Var. *Cretica*: Phœnician coast, etc.

TARAXACUM (N.O. *Compositæ*): Dandelion. Perennial stemless herbs with yellow flowers.

T. OFFICINALE: General, mountains and coast.

T. SEROTINUM=T. SYRIACUM.

T. LIBANOTICUM: Lower Lebanon. Six other species and varieties.

TEAZEL. See DIPSACUS.

TECOMA (N.O. *Bignoniaceæ*): Tall trees with digitate leaves, and large flowers in terminal bunches, golden-yellow, purple, pink, or white.

T. UNDULATA: Beyrout. Probably cultivated.

TELEPHIUM (N.O. *Illecebraceæ*): Glaucous herbs or undershrubs, with procumbent stems clothed with oval leaves, and clusters of small white or greenish flowers.

T. IMPERATI: Lebanon.

T. SPHÆROSPERMUM: The southern desert.

TELMISSA MICROCARPA (N.O. *Crassulaceæ*): A dwarf annual herb resembling *Sedum*, with one-seeded capsules, succulent leaves, and pinkish-white flowers. Hills about Jerusalem, etc.

TETRAGONOLOBUS (N.O. *Leguminosæ*): Herbs resembling *Lotus*.

T. PURPUREUS: Winged pea. Large leaflets and purple flowers. Highlands of Moab. Var. *Palæstinus*: Universally distributed.

TEUCRIUM (N.O. *Labiatæ*): Germander. A genus of herbs and shrubs, with a five-toothed calyx, a short-tubed corolla, and a wrinkled or netted nut.

T. CHAMÆDRYS: Wall-germander.

T. SOCINIANUM (P.): Eastern slopes of Lebanon.

T. SPINOSUM: Galilee. Sixteen other species and varieties.

TEXIERA GLASTIFOLIA (N.O. *Cruciferæ*): A glaucous herb with small pale yellow flowers and round seed-pods. Damascus, etc.

THALICTRUM (N.O. *Ranunculaceæ*): Herbaceous plants marked by the absence of petals; the foliage resembles the common columbine.

T. ORIENTALE: Lebanon.

THESIUM (N.O. *Santalaceæ*): Herbs sometimes shrubby at base; flowers solitary or axillary, in cymes.

T. DIVARICATUM: Subalpine Lebanon. Six other species.

THISTLE. See CARDUUS, CARTHAMUS, CIRSIUM, CNICUS, SCOLYMUS.

THLASPI (N.O. *Cruciferæ*): Small herbaceous plants, with oblong leaves, small white flowers, and seeds in a pouch.

T. ARVENSE: Pennycress, or mithridate mustard.

T. PERFOLIATUM: Shepherd's-purse. Wâdys of Moab and Gilead. Four other species.

THORNY BURNET. See POTERIUM.

THRIFT. See ARMERIA.

THRINCIA TUBEROSA (N.O. *Compositæ*): A perennial stemless herb with yellow flowers. Maritime and central districts. General.

THYMELÆA (N.O. *Thymelaceæ*): Shrubs with minute fleshy leaves and small yellow flowers.

T. HIRSUTA: Flowers five to ten in clusters at or near the tip of twigs. Sands, coasts, Carmel. One other species.

THYMUS (N.O. *Labiatæ*): Thyme. Perennial herbs or shrubby plants.

T. SERPYLLUM: Wild-thyme. Leaves ovate or linear; pink flowers. Desert near Gaza.

T. SYRIACUS: White flowers. Base of Hermon, etc. Four other species and varieties.

TILLÆA TRICHOPODA (N.O. *Crassulaceæ*): A minute annual herb with opposite leaves. Maritime districts.

TOAD-FLAX. See LINARIA.

TOBACCO. See NICOTIANA.

TOLPIS ALTISSIMA (N.O. *Compositæ*): A bristly herb with many-flowered heads of yellow flowers. Waste plains; universal.

TORDYLIUM (N.O. *Umbelliferæ*): Annual hairy herbs.

T. ÆGYPTIACUM: Universally distributed.

T. SYRIACUM: Maritime and northern districts. Two other species.

TORILIS (N.O. *Umbelliferæ*): Hedge-parsley. Annual herbs with white or reddish flowers.

T. ANTHRISCUS: Hills of Gilead and Moab. Five other species.

TRACHELANTHUS (N.O. *Boraginaceæ*): Herbs allied to a species of *Solenanthus*, with a tubular corolla of red edged with yellow.

T. FOLIOSA (P.): Highlands of Gilead.

TRACHELIUM (N.O. *Campanulaceæ*) : Perennial herbs with shrubby base and small white or blue corymbed flowers.

T. Postii : Blue flowers and olive-green leaves.

T. tubulosum : White flowers. On vertical rocks, Lebanon.

TRAGANUM NUDATUM (N.O. *Chenopodiaceæ*) : A much-branched shrub, with alternate fleshy leaves and axillary flowers. Southern desert.

TRAGOPOGON (N.O. *Compositæ*) : A woolly plant, with narrow leaves and many-flowered heads.

T. buphtalmoides : Florets yellow. Lebanon.

T. longirostre (var. *Abbreviatum*) : Florets pink or violet.

T. porrifolium (*Salsify*). Four other varieties.

TRAVELLER'S JOY. See CLEMATIS.

TREACLE-MUSTARD. See CLYPEOLA.

TRIADENIA RUSSEGGERI (N.O. *Hypericineæ*) : A branching glaucous shrub, with small, fleshy, dotted leaves and minute flowers. Among ruins.

TRIBULUS (N.O. *Zygophyllaceæ*) : Annual prostrate herbs, with pinnate leaves and single flowers springing from the forks of the branches.

T. alatus : Southern desert.

T. terrestris : This species has yellow flowers and hairy fruits composed of five carpels, which are spinous on the back.

TRICHODESMA (N.O. *Boraginaceæ*) : Desert annual herbs, with opposite leaves and racemes of flowers.

T. Africanum : Wâdys round the Dead Sea. Var. *Ehrenbergii* : Wâdy Zuweirah, south-west of Dead Sea. One other species.

TRIFOLIUM (N.O. *Leguminosæ*) : Clover. Herbs with three, or rarely five to seven, trefoil leaflets.

T. arvense : Hare's-foot trefoil. Lebanon.

T. GLOBOSUM : Northern districts.

T. INCARNATUM : Crimson clover. Probably introduced.

T. PALÆSTINUM (P.): In the southern hills and coast.

T. REPENS : Dutch clover. General. Fifty other species and varieties.

TRIGLOCHIN PALUSTRE (N.O. *Jungagineæ*) : Marsh arrow-grass. Said to be found in marshes of Zerka River, south of Carmel.

TRIGONELLA (N.O. *Leguminosæ*) : A large genus of herbaceous scented plants, with leaves composed of three leaflets, and flowers, either solitary or in clusters, in the leaf axils, succeeded by many-seeded pods.

T. BERYTHÆA (P.) : Plain of Phœnicia.

T. FŒNUM GRÆCUM : Fenugreek. An erect annual the seeds of which were used for medicinal and culinary purposes by the ancient Egyptians. Callirrhoe, Moab. Twenty-four other species and varieties.

TRIPLE-AWNED GRASS. See ARISTIDA.

TRISETUM NEGLECTUM (N.O. *Gramineæ*) : A grass with panicled inflorescence. Two other species.

TRITICUM VULGARE (N.O. *Gramineæ*) : Cereal wheat. Cultivated.

T. SPELTA : Spelt. Two other species.

TRIXAGO APULA (N.O. *Scrophulariaceæ*) (var. *Flaviflora*) : Annual herbs, with sessile leaves and purple or variegated flowers. Littoral districts.

TULIPA (N.O. *Liliaceæ*) : Tulip. A well-known genus of bulbous plants.

T. GESNERIANA : The tulip of gardens. Grassy and rocky hills, Gilead.

T. LOWNEI (P.) : Shaded pink flowers. Lebanon and Hermon.

T. MONTANA : Universal. Var. *Julia* : Lebanon.

T. OCULUS-SOLIS : Fields and hills, Galilee.

T. PRÆCOX : Orange-red flowers. Gilead and Moab.

TUNICA (N.O. *Sileneæ*): A genus between *Dianthus* and *Gypsophila.*

T. SAXIFRAGA: Plains and dry valleys under Lebanon.

T. SYRIACA: Northern Lebanon. Three other species.

TURGENIA (N.O. *Umbelliferæ*): Herbs with pinnatisect leaves and few-rayed umbels.

T. LATIFOLIA, and varieties: Universal in cultivated ground.

TURGENIOPSIS FŒNICULA (N.O. *Umbelliferæ*): An annual white-flowered herb. Lebanon and Anti-Lebanon.

TUSSILAGO FARFARA (N.O. *Compositæ*): Colt's-foot. A perennial herb with radiate heads of yellow flowers on a short erect flower-stalk; the heart-shaped leaves appear after the flowers. Coast to Subalpine Lebanon.

TYPHA LATIFOLIA (N.O. *Typhaceæ*): Bulrush.

T. ANGUSTIFOLIA: Lesser bulrush.

TYRIMNUS LEUCOGRAPHUS (N.O. *Compositæ*): A thistle resembling *Carduus.* Spiny, with purple flowers. Waste ground from the coast to Hermon.

U.

ULMUS CAMPESTRIS (N.O. *Ulmaceæ*): Common elm. In the north.

UMBILICUS (N.O. *Crassulaceæ*): Fleshy-leaved plants, with white or yellow bell-shaped flowers.

U. LIBANOTICUS (P.): General on rocks in hilly districts.

U. PENDULINUS: Pennywort. Hill districts on rocks. Four other species.

URGINEA (N.O. *Liliaceæ*): A genus closely allied to *Scilla.*

U. MARITIMA = U. SCILLA: The bulbs of this plant are the 'squills' of medicine. Maritime sands.

UROSPERMUM (N.O. *Compositæ*): Annual plants, with alternate divided leaves and flower-heads on long stalks.

U. DALECHAMPII: Plain of Huleh.

U. PICROIDES: Universal in cultivated land.

URTICA URENS (N.O. *Urticaceæ*): Small nettle. Waste places.

U. DIOICA: Common nettle. Waste places, Lebanon and Anti-Lebanon.

U. MEMBRANACEA: On the coast.

U. PILULIFERA: Roman nettle. Lower districts among ruins; reaches a height of 6 feet in the Jordan Valley.

UTRICULARIA VULGARIS (N.O. *Lentibulariaceæ*): Bladder-wort. An aquatic plant, with finely divided leaves and delicate yellow flowers rising above the water. The root stems and leaves are furnished with small bladders. Above Lake Huleh in stagnant water.

V.

VAILLANTIA (N.O. *Rubiaceæ*): A genus nearly allied to *Galium*, differing in having a campanulate corolla.

V. HISPADA: Carmel, etc.

V. MURALIS: Lower Lebanon, Moab, etc.

VALERIAN. See CENTRANTHUS and VALERIANA.

VALERIANA (N.O. *Valerianeæ*): Valerian. Herbaceous plants with a tuft of leaves varying in shape, from amongst which the flower-stalk springs. The numerous flowers are white or red, in panicles or heads.

V. DIOSCORIDES: Maritime and northern mountain region.

V. SISYMBRIIFOLIA: Crest of mountains of Gilead and Moab. Thirteen other species and varieties.

VALERIANELLA: A genus resembling *Valerian*.

V. SOYERI: Slopes of Mount Nebo. Two other species.

VARTHEMIA IPHIONOÏDES (P.) (N.O. *Compositæ*): A shrubby branching plant resembling *Inula*. Central hill range throughout Palestine.

VELEZIA (N.O. *Sileneæ*): A small genus allied to *Tunica*, but with a more slender calyx. Annual plants, with linear opposite leaves and solitary axillary red flowers.

V. FASCICULATA: Lebanon.

V. RIGIDA: Plain of Gennesaret.

VENUS'S LOOKING-GLASS. See SPECULARIA.

VERBASCUM (N.O. *Scrophulariaceæ*): Mullein, Adam's-flannel. Tall erect herbs often covered with wool, with coarse alternate leaves, and yellow, brown, purple, or rarely white, flowers.

V. BLATTARIA: Moth-mullein. Under Anti-Lebanon.

V. CEDRETI (P.): Lebanon and Anti-Lebanon. Thirteen other species.

VERBENA (N.O. *Verbenaceæ*): Herbs or shrubs with opposite leaves and sessile flowers, in single or panicled spikes.

V. OFFICINALIS: Vervein. This plant has always been considered 'an herb of grace.' It was used in medicine, and was also considered to bring good luck.

> 'Here holy vervayne and here dill,
> 'Gaynst witchcraft much avayling.'
>
> *Michael Drayton.*

Universal.

V. SUPINA: Mount Carmel, Tabor, etc.

VERBOSUM SIMPLEX (N.O. *Scrophulariaceæ*): On the plains and low hills round Lebanon. Two other species.

VERONICA (N.O. *Scrophulariaceæ*): Speedwell. Herbs or undershrubs, with opposite leaves and blue flowers in axillary or terminal spikes or racemes.

V. AGRESTIS: Field speedwell. Jordan Valley, Moab.

V. ANAGALLIS: Water-speedwell. Universal in wet places.

V. ARVENSIS: Wall-speedwell. Cultivated, and rocky places on the coast.

V. CHAMÆDRYS : Germander speedwell. Leaves toothed; flowers deep blue, in clusters. The Hauran.

V. ORIENTALIS : Common in the north and hill districts.

V. SYRIACA (var. *Pedunculata*) : General on the plains. Twenty other species and varieties.

VERVEIN. See VERBENA.

VETCH. See VICIA.

VIBURNUM TINUS (N.O. *Caprifoliaceæ*) : Laurestinus. A shrub with dark green opposite leaves and white flowers in large terminal cymes. Valleys under Lebanon, Mount Carmel, Tabor.

VICIA (N.O. *Leguminosæ*) : Weak plants, generally climbing, with pinnate leaves, and flowers, solitary or in clusters.

V. CANESCENS (P.) : Lebanon.

V. LUTEA (var. *Hirta*) : Yellow vetch.

V. SATIVA : Common vetch or tare. General in fields. Twenty other species and varieties.

VINCA (N.O. *Apocynaceæ*) : Periwinkle. Woody herbaceous plants with shining leaves and blue, purple, or white flowers.

V. HERBACEA : Plains of Sharon and Esdraelon.

V. LIBANOTICA : Lebanon and Anti-Lebanon.

VINCETOXICUM (N.O. *Asclepiadaceæ*) A genus of perennial herbs or undershrubs with very small flowers.

V. CANESCENS : The Hauran.

VINE. See VITIS.

VIOLA (N.O. *Violaceæ*) : A genus of herbaceous, rarely shrubby, plants, with alternate leaves, leaf-like stipules, and irregular flowers.

V. BIFLORA : Lebanon.

V. LIBANOTICA : Lebanon, 7,000 to 9,500 feet.

V. ODORATA : Sweet violet. Wooded hills of Central and Eastern Palestine. Five other species.

VIPER'S BUGLOSS. See ECHIUM.

VIRGINIAN STOCK. See MALCOLMIA.

VISCUM ALBUM (N.O. *Loranthaceæ*): Mistletoe. Hermon.

V. CRUCIATUM: On the olive. Abundant at Jerusalem, etc.

VITEX AGNUS-CASTUS (N.O. *Verbenaceæ*): A woody aromatic plant with a two-lipped corolla. Plains and Jordan Valley.

VITIS VINIFERA (N.O. *Ampelideæ*): The vine. Cultivated everywhere.

V. ORIENTALIS: Leaves pinnate; berry as large as a currant, with little juice, black, and four-seeded. Among ruins in the Hauran.

VULPIA BREVIS (P.) (N.O. *Gramineæ*): A grass resembling *Festuca*. Lebanon, 5,000 feet.

V. PATENS: Southern desert.

W.

WALLFLOWER. See CHEIRANTHUS.

WALL-SPEEDWELL. See VERONICA.

WATERCRESS. See NASTURTIUM OFFICINALE.

WATER-LILY. See NYMPHÆA.

WATER-MELON. See CUCURBITA.

WATER-MILFOIL. See MYRIOPHYLLUM.

WATER-PARSNIP. See BERULA.

WATER PENNYWORT. See HYDROCOTYLA.

WATER-PIMPERNEL. See SAMOLUS.

WATER-SPEEDWELL. See VERONICA.

WATER-STARWORT. See CALLITRICHE.

WATER-PARSNIP. See BERULA.

WATER-WORT. See ELATINE.

WEST INDIAN MISTLETOE. See LORANTHUS.

WHEAT. See TRITICUM.

WILD-BASIL. See CALAMINTHA.

WILD-MARJORAM. See ORIGANUM.

WILLOW. See SALIX.

WILLOW-HERB. See EPILOBIUM.

WINTER-CRESS. See BARBAREA.

WOAD. See ISATIS.

WOLFFIA HYALINA (N.O. *Lemnaceæ*): A floating plant, with lobed leaves or fronds, and one or two flowers. In stagnant waters.

WOOD-BETONY. See BETONICA.

WOODBINE=LONICERA.

WOODRUFF=ASPERULA.

WOOD-SORREL. See OXALIS.

WOODY NIGHTSHADE. See SOLANUM.

WULFENIA ORIENTALIS (N.O. *Scrophulariaceæ*): A perennial herb with a five-parted calyx and tubular corolla. Northern Lebanon.

WYTHANIA SOMNIFERA (N.O. *Solanaceæ*): A woolly shrub with upper leaves usually opposite, and clusters of greenish-yellow flowers in the axils. Waste places on the coast and Jordan Valley.

X.

XANTHIUM (N.O. *Compositæ*): A genus of annuals with monœcious flowers.

X. ANATOLICA: General.

X. STRUMARIUM (var. *Antiquorum*): Burweed.

XERANTHEMUM (N.O. *Compositæ*): Showy annuals with leaves cottony and whitish underneath, and purple or white flowers of the texture called 'everlasting.'

X. LONGEPAPPOSUM. Gilead, Galilee. Three other species.

Y.

YELLOW-BARTSIA. See EUPHRAYIA.

YELLOW-PEA. See LATHYRUS.

YELLOW-RATTLE. See RHINANTHUS.

YELLOW-WORT. See CHLORA.

Z.

ZACYNTHA VERRUCOSA (N.O. *Compositæ*): An annual with divided leaves, and lateral and terminal heads of flowers. Maritime districts, Moab.

ZANNICHELLIA PALUSTRIS (N.O. *Naiadaceæ*): Horned pondweed. A submerged aquatic, with long cord-like stems, narrow opposite leaves, and flowers at their base. Lake Phiala, Huleh; marshes.

ZILLA MYAGROIDES (N.O. *Cruciferæ*): An African glaucous undershrub, with spinescent branches and racemes consisting of a few violet flowers. South-western end of Dead Sea.

ZIZYPHORA (N.O. *Labiatæ*): Thyme-like herbs or undershrubs, with square stems, opposite leaves, and flowers in scanty whorls.

Z. CAPITATA: Littoral and southern desert districts, Moab. Three other species.

ZIZYPHUS (N.O. *Rhamnaceæ*): The jujube or lotus genus. Generally consists of stiff shrubs, with spiny branches, alternate three-nerved leaves, flowers with five small hood-shaped petals, and a berry-like fruit.

Z. LOTUS : One of the plants supposed to have yielded the sweet fruits from which the ancient *Lotophagi* took their name. Jordan Valley, etc.

Z. SPINA CHRISTI : Extremely abundant in the whole Jordan Valley.

Z. VULGARIS : The berries of this species are commonly eaten in a fresh and dried state in the Mediterranean region, and are the 'jujubes' of the shops. Not uncommon in the warmer parts.

ZOEGEA (N.O. *Compositæ*): A genus of annual herbs allied to *Centaurea*.

Z. PURPUREA : Rocky places south-east and south-west of Dead Sea. One other species.

ZOLLICKOFERIA (N.O. *Compositæ*): Mediterranean herbs, with pinnate leaves, long narrow corolla, and cylindrical fruit.

Z. ARABICA : Wâdys south of Dead Sea.

Z. NUDICAULIS : Wâdy Zuweirah, south-west of Dead Sea.

Z. SPINOSA : Wâdys south-west of Dead Sea. Two other species.

ZOZIMIA (N.O. *Umbelliferæ*): Herbs with compound leaves and compound umbels.

Z. ABSINTHIFOLIA : Near Gaza.

ZYGOPHYLLUM (N.O. *Zygophyllaceæ*): Bean-capers. A genus of trees and shrubs with opposite leaves consisting of two leaflets, solitary stalked flowers with white, red, or yellow petals; and a capsule which has five compartments, each containing a single seed.

Z. ALBUM : Southern desert.

Z. COCCINIUM : Used by the Arabs for pepper. Barren plains north and south of Dead Sea.

Z. DUMOSUM (P.) : South end of Dead Sea.

Z. FABAGO : Used for capers. Dry plains in the north.

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